N61414.AR.001729
NAB LITTLE CREEK
5090.3a

FINAL CONSTRUCTION QUALITY ASSURANCE PLAN FOR NON TIME CRITICAL REMOVAL ACTION FOR SOLID WASTE MANAGEMENT UNIT 3 (SWMU3) PIER 10 SANDBLAST YARD AND SOLID WASTE MANAGEMENT UNIT 7B (SWMU7B) SMALL BOATS SANDBLAST YARD JEB LITTLE CREEK VA

2/1/2013

CH2MHILL

Final

Construction Quality Assurance Plan (CQAP) for Non-Time Critical Removal Action Solid Waste Management Unit 3 – Pier 10 Sandblast Yard and Solid Waste Management Unit 7b – Small Boats Sandblast Yard

Joint Expeditionary Base Little Creek Virginia Beach, Virginia

Contract Task Order WE65

February 2013

Prepared for

Department of the Navy
Naval Facilities Engineering Command
Mid-Atlantic

Under the

NAVFAC CLEAN 8012 Program
Contract N62470-11-D-8012

Prepared by

CH2MHILL®

Virginia Beach, Virginia

Contents

Acronyms and Abbreviations iii

1. Introduction 1-1
1.1 Report Purpose and Scope 1-1
1.2 Project Objectives and Scope 1-1
1.3 Applicable Regulations and Guidance 1-2

2. Involved Parties—Responsibilities and Authority 2-1
2.1 Organizational Structure 2-1
2.2 Responsibilities 2-1
2.2.1 Naval Facilities Engineering Command Mid-Atlantic (Owner, RPM, and Engineer of Record) 2-1
2.2.2 Construction Contractor (Contractor) 2-1
2.2.3 Construction Quality Assurance Manager 2-2
2.2.4 Independent Testing Laboratories 2-2
2.2.5 Vendors and Subcontractors to the Construction Contractor 2-2

3. Project Communications 3-1
3.1 Lines of Communication 3-1
3.2 Project Meetings 3-1
3.2.1 Pre-construction Conference 3-1
3.2.2 Progress Meetings 3-2
3.2.3 Quality Control Meetings 3-2
3.3 Document Transmittals 3-2
3.3.1 Contract Clarification/Interpretation Request 3-2
3.3.2 Change Orders 3-2
3.3.3 Contractor Submittals 3-3
3.3.4 Daily Observation Reports 3-3
3.3.5 Record Keeping 3-3

4. Description of Quality Assurance and Quality Control Testing and Inspection 4-1
4.1 General 4-1
4.2 Observation and Verification Testing 4-1
4.3 Construction Specifications 4-1
4.4 Construction Quality Assurance—General 4-1
4.4.1 Work Elements 4-2

5. Final Project Completion Summary Memorandum Requirements 5-1

6. References 6-1

Table (located at the end of the section)

4-1 CQA Requirements Table

Attachments

A Drawings and Specifications
B SWMU 3 and SWMU 7b ARARs
C Daily Observation Report

Acronyms and Abbreviations

ARAR	applicable or relevant and appropriate requirement
BTEX	benzene, toluene, ethylbenzene, and xylene
CCR	Construction Completion Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CQA	construction quality assurance
CQAP	Construction Quality Assurance Plan
CQC	construction quality control
cy	cubic yard
DFOW	definable feature of work
EE/CA	Engineering Evaluation/Cost Analysis
EPA	Environmental Protection Agency
IDW	investigation-derived waste
JEB	Joint Expeditionary Base
McLean	McLean Contracting Company
NAVFAC	Naval Facilities Engineering Command
NTCRA	non-time critical removal action
QA	quality assurance
QC	quality control
sq ft	square feet
SVOC	semi-volatile organic compound
SWMU	Solid Waste Management Unit
TPH	total petroleum hydrocarbons
VOC	volatile organic compound
WP	work plan

SECTION 1

Introduction

1.1 Report Purpose and Scope

This document presents the Construction Quality Assurance Plan (CQAP) for the Non-Time Critical Removal Action (NTCRA) at Solid Waste Management Unit (SWMU) 3 and SWMU 7b, Joint Expeditionary Base (JEB) Little Creek, Virginia Beach, Virginia.

The purpose of this document is to specify in detail the methods, procedures, and frequency of inspection and testing activities in accordance with the requirements set forth in the project specifications. The data and information collected during construction QA observation of the NTCRA will be used to inform the Navy of conformity of the NTCRA activities with the project plans/ specifications, and work progress. CH2M HILL is responsible for onsite communication with the Contractor, observing implementation of the Contractor's Quality Control (QC) program, and providing notification to the Navy of any non-conformance or potential non-conformance of the drawings, specifications, and any applicable work planning documents. The drawings and specifications referred to in this plan are included in the Final (100%) Design Drawings, Fiscal Year (FY) 2012 Maintenance Dredging, Joint Expeditionary Base Little Creek – Teen Piers, Virginia Beach, Virginia, June, 2012 (NAVFAC, 2012). The drawings and specifications are included as **Attachment A**.

Quality Assurance (QA) activities are differentiated from quality control (QC) activities initiated by a manufacturer, fabricator, installer, or a construction contractor necessary to control the quality of the constructed project. It is the responsibility of the owner's QA representatives to observe that the contractor's QC plan is being implemented and followed according to the project specifications and drawings. Thus, the specific function of the QA plan, as presented herein, is to focus on quality levels and requirements of specific elements of the design that are critical to the completion of the NTCRA in accordance with all applicable laws and regulations as a means of observing whether the Contractor performs the work in accordance with their approved Work Plan (McLean, 2013), QC Plan (McLean, 2012) and Environmental Protection Plan (Bay Environmental, 2012).

The scope of this CQAP includes:

- Identifying the project participants and organizational structure
- Defining participants' responsibility and authority
- Outlining project communications
- Delineating quality levels and test requirements, as identified in the specifications

1.2 Project Objectives and Scope

The removal action objectives associated with completion of the SWMU 3 and SWMU 7b NTCRAs are as follows:

- SWMU 3: Reduce concentrations of copper, lead, nickel, tin, and zinc in sediment surrounding the dry dock and anchoring system such that concentrations do not pose unacceptable risk to ecological receptors.
- SWMU 7b: Reduce concentrations of copper, lead, mercury, and zinc in sediment such that remaining concentrations do not pose unacceptable risk to ecological receptors.

The scope of work to be completed for the SWMU 3 NTCRA includes the removal and offsite disposal of an estimated 12,600 cubic yards (cy) of impacted sediment surrounding the dry dock and its anchoring system followed by placement of a clean sand layer. The scope of work to be completed for the SWMU 7b NTCRA includes the removal and offsite disposal of an estimated 3,500 cy of impacted sediment followed by the placement of a clean sand layer. Specific work elements associated with the SWMU 3 and SWMU 7b NTCRAs are mobilization/site preparation, mechanical dredging, dewatering, barge decontamination, site restoration, and demobilization. Obtaining copies of laboratory testing results of waste characterization and sand backfill samples will be

conducted to independently observe compliance with third-party subcontractor project plans and Navy specifications. Additionally, the following construction records generated by the third-party Contractor's Construction Quality Control (CQC) Manager will be independently reviewed by the Construction Quality Assurance (CQA) Manager:

- Dredging and waste removal operations
- Proper types and compositions of materials being delivered to the site
- Proper documentation of the material being transported and disposed of offsite
- Laboratory testing results
- Final dredge depths
- Exposure monitoring/air sampling data
- Final sand placement thickness

1.3 Applicable Regulations and Guidance

Regulatory compliance for the NTCRAs will be in accordance with the Applicable or Relevant and Appropriate Requirements (ARARs) presented in the Final SWMU 3 Engineering/Cost Analysis (EE/CA) (CH2M HILL, 2012) and Final SWMU 7b EE/CA (CH2M HILL, 2013). The ARARs tables are included as **Attachment B**.

SECTION 2

Involved Parties—Responsibilities and Authority

2.1 Organizational Structure

Key members of the project organization include the Owner, the Engineer of Record, the CQA Manager, the CQC Manager, and the Contractor. Authorities and responsibilities of the key members are presented in the paragraphs that follow.

The following list of key members is provided for reference:

Function	Firm	Contact	Phone No.	FAX No. or Email
Owner	NAVFAC Mid-Atlantic (FEAD)	Pete Fovargue	757-462-1019	Peter.Fovargue@navy.mil
RPM	NAVFAC Mid-Atlantic (Environmental)	Bryan Peed	757-341-0480	Bryan.Peed@navy.mil
Engineer of Record	NAVFAC Mid-Atlantic	James Georgo	757-444-0830	James.Georgo@navy.mil
Contractor (Superintendent)	McLean	Weldon Diggs	757-373-0931	WDiggs@mcleancont.com
CQC Manager	McLean	David Davis	757-620-2725	DDavis@mcleancont.com
CQA Manager	CH2M HILL	Jeremy Scott	850-686-0222	Jeremy.Scott@ch2m.com

Note: The above table will be updated, if necessary, throughout the completion of the NTCRAs.

2.2 Responsibilities

2.2.1 Naval Facilities Engineering Command Mid-Atlantic (Owner, RPM, and Engineer of Record)

Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic has overall responsibility for the planning, design, and construction for the SWMU 3 and SWMU 7b NTCRAs. In this capacity, NAVFAC Mid-Atlantic will conduct project meetings, approve and disapprove all change requests, and provide general oversight of the project. NAVFAC Mid-Atlantic, as the Owner, has contracted CH2M HILL to provide CQA services during construction.

The Engineer of Record is responsible for technical decisions pertaining to implementing the remedial design and conducting the final inspection. The Engineer of Record will perform the following duties:

- Clarify or interpret requirements of the design
- Review preconstruction submittals for conformance to the design
- Review requests for design changes or clarifications during construction
- Prepare design changes to account for unexpected site conditions or changes in construction/operation methodology

2.2.2 Construction Contractor (Contractor)

The Contractor, by way of a specific contract with the Owner, is charged with performing and controlling the construction work in accordance with the design documents. The Contractor is required to establish and maintain, throughout construction, a QC program in accordance with Specification Section 01 45 02.

2.2.3 Construction Quality Assurance Manager

The CQA Manager is the onsite construction quality assurance agent for the Owner. The CQA Manager is responsible for daily observation of construction, as well as documenting verification testing of the Contractor's materials, workmanship, and quality control activities, as required in this CQAP. The CQA Manager is responsible for notifying the Owner of any observed non-compliance during the NTCRAs with the Final (100%) Design Drawings and Specifications, FY 2012 Maintenance Dredging, Joint Expeditionary Base Little Creek – Teen Piers, Virginia Beach, Virginia, June, 2012 (**Attachment A**) and ARARs (**Attachment B**).

The CQA Manager will perform the following duties:

- Observe implementation of the Contractor's QC program
- Review as-built records and final construction quality assurance documentation for the project
- Review frequency and results of Contractor-submitted quality control tests for compliance with contract requirements
- Review Contractor Daily Inspection Reports and test data for completeness
- Attend preconstruction meetings, progress meetings, and QC meetings and prepare meeting summaries for the Engineer of Record and Owner
- Observe materials upon delivery and identify where the type, quantity, and size of material are not in compliance with the specifications
- Observe performance of Contractor's work and identify observed areas of non-compliance with the drawings and specifications
- Prepare daily observation reports of construction activities and observations
- Advise the Owner, NAVFAC RPM, and Engineer of Record of site conditions or construction conditions that may affect the intent, completion, schedule, or quality of the work

2.2.4 Independent Testing Laboratories

Independent testing laboratories will be retained by the Contractor as specified in the contract documents. Responsibilities of the independent testing laboratories will include the following:

- Controlling and supervising independent-testing laboratory personnel assigned to the project
- Providing testing and sampling personnel that are properly qualified and trained for the assigned tasks
- Maintaining the proper equipment and supplies for accomplishing the assigned tasks in accordance with specified test procedures
- Documenting and submitting test results and observation records as established by the contract documents, and reporting any non-compliance to the Owner, Contractor, and CQA Manager immediately

2.2.5 Vendors and Subcontractors to the Construction Contractor

The Construction Contractor's Vendors and Subcontractors are agents of the Contractor by way of contracts, subcontracts, and similar arrangements. As such, they are responsible, through the Contractor, for maintaining quality control procedures in accordance with their contractual arrangements and the Contractor's quality control plans. These agents should also provide the Contractor with quality control data and reports necessary for their submittals.

SECTION 3

Project Communications

3.1 Lines of Communication

Accurate, timely communications are required to avoid construction-related conflicts and potential errors and omissions. The Owner, Contractor, Engineer of Record, CQC Manager, CQA Manager, and their respective employees and staff must have an established communication network. Establishing open lines of communication is essential for maintaining strong working relationships and producing quality work.

Lines of communication will be reviewed by all parties at the pre-construction meeting. The CQA Manager is responsible for observing implementation of the Contractor's QC program. As the CQA Manager, CH2M HILL is responsible for onsite communications with the Contractor in regards to the CQA Manager's observations and any concerns that the CQA Manager may have with how the NTCRAs are being completed. However, the CQA Manager is not authorized to direct the Contractors' means and methods for completing the work associated with the NTCRAs. The CQA Manager does have a responsibility to notify the CQA Manager and Owner in an appropriately timely manner if the CQA Manager observes any non-conformance or potential non-conformance of the drawings, specifications, and any applicable work planning documents.

3.2 Project Meetings

Project meetings, to include QC meetings held once every two weeks, preparatory phase meetings, and initial phase meetings, will be scheduled by the Contractor. The purpose of the project meetings is to keep all parties informed and provide a forum for discussing design, construction, work progress, schedule, safety, and QA/QC-related issues.

3.2.1 Pre-construction Conference

A meeting will be held to review the project, schedule, and requirements for the Contractor's QC plan before construction startup. Meeting attendees may include the Owner, Engineer of Record, Contractor, CQC Manager, CQA Manager, and selected subcontractors. The topics of this meeting should include, but not be limited to:

- Providing each organization with relevant documents to include design drawings, specifications, site health and safety plans, and other applicable documents. All parties should use the opportunity to distribute relevant documents.
- Familiarizing each organization with its specific responsibilities with respect to construction QA/QC relative to the design criteria, design drawings, schedules, and specifications.
- Reviewing lines of authority and communication for each organization.
- Reviewing the Contractor's work plan (WP) and schedule.
- Discussing the established procedures and protocol for observations and tests, including sampling strategies.
- Discussing the procedures for handling construction deficiencies, repairs, and retesting.
- Reviewing methods for documenting and reporting inspections and testing data.
- Discussing procedures for protecting construction materials and preventing damage to the materials from inclement weather or other adverse events.

3.2.2 Progress Meetings

Progress meetings, if required, will be held at a location and frequency to be determined by the Owner and Contractor. The meeting attendees may include, but are not limited to, the CQC Manager, Engineer of Record, and CQA Manager. Generally, the purpose of the meetings is to:

- Review activities and accomplishments
- Review the Contractor's WP for construction personnel and equipment assignments for the upcoming weeks
- Discuss existing or potential construction or schedule issues

3.2.3 Quality Control Meetings

In accordance with Specification Section 01 45 02 subsection 1.9, after the start of dredging, the Contractor will conduct QC meetings held once every two weeks, led by the CQC Manager, at the work site with the Contractor personnel performing the work. The CQA Manager will attend the QC meetings. The Owner and Engineer of Record may attend the QC meetings. The CQC Manager will prepare the minutes of the meeting and provide a copy to the CQA Manager, Owner, and Engineer of Record within two working days after the meeting. The CQA Manager will record notes during the meeting and provide the notes to the NAVFAC RPM.

3.3 Document Transmittals

Documenting transmittals among the project parties and providing a record of communications are necessary for keeping appropriate construction and QA/QC personnel informed of project requirements, progress, and quality of the work.

3.3.1 Contract Clarification/Interpretation Request

Contract Clarification/Interpretation Requests are submitted when an explanation of the intent of a specific construction requirement, as presented in the design documents, is required. Contract Clarification/Interpretation Requests will be submitted to the Engineer of Record. All interpretations of design or specifications by the Engineer of Record will be issued in writing. In special cases, the Engineer of Record may communicate a design interpretation or clarification verbally followed by written confirmation. The CQA Manager may, upon request of the Owner or Engineer of Record, review and provide an opinion on a contract clarification/interpretation request. However, the CQA Manager will have no authority to approve or disapprove a contract clarification/interpretation request. The Owner is responsible for informing all parties of the Engineer of Record's interpretations and will control the distribution of documents to construction, quality assurance, or regulatory personnel.

Any Contract Clarifications/Interpretations leading to a change in contract schedule or cost must be processed in accordance with the change order process described below.

3.3.2 Change Orders

A change order is used, by the Owner only, whenever a change in drawings and specifications is deemed necessary for the following reasons:

- Changed site conditions
- Changed materials conditions
- Alternate design procedures proposed
- Alternate materials proposed

Since change orders generally result in changes in contract schedules or costs, change order requests will be submitted to the Owner by the Contractor by way of change order requirements specified in the construction contract. The Engineer of Record and/or CQA Manager may, upon request of the Owner, review and provide an opinion on a change order request. However, the Engineer of Record or the CQA Manager will have no authority to approve or disapprove a change order request.

3.3.3 Contractor Submittals

Preconstruction submittals will be transmitted by the Contractor to the Engineer of Record and the Owner. The CQA Manager may, upon request of the Owner, review and provide an opinion on the submittals. However, the CQA Manager will have no authority to approve or disapprove a submittal. The Engineer of Record will document actions taken on the submittals. The reviewed submittal or appropriate form will be transmitted to the Contractor and a copy will be provided to the Owner and the CQA Manager.

3.3.4 Daily Observation Reports

Daily observation reports will be maintained by the CQA Manager. At the end of each week, copies of the daily observation reports will be submitted to the NAVFAC RPM. The daily observation reports will be completed electronically and consecutively numbered. The form for the daily observation reports is included in **Attachment C**.

The content of the reports will include, at a minimum:

- Weather conditions
- The content of all substantive conversations held with the Contractor at the site, and commitments made by either party
- Item, condition, or activity observed or tested
- Location, date, and type of observation or test
- Observation or verification of test source criteria (drawing, specification, etc.)
- Results or acceptability
- Reference to corrective action taken in connection with non-conformances
- Conditions that may cause a delay by the Contractor
- Log of work that commenced, status of work in progress, and all work completed
- Location of the work, including its description, and which Contractor or subcontractor is performing it
- Summary of verification testing
- Log of photos taken of site activities
- Signature of the person completing the daily observation report with full name, title, and date
- Verification statement attesting that, to the best of the CQA Manager's knowledge, the report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications, except as noted in the report

3.3.5 Record Keeping

Maintaining complete, accurate records of all work is crucial to observing conformance to the design. The following identifies categories of forms and types of forms that will be used by the CQA Manager.

- QC Documents and Forms
  - Transmittal Form
  - Submittal Routing
  - Clarification Request
  - Change Order

- Punch Lists
  - Daily Report
  - Progress Meeting Reports
  - QC Meeting Reports
  - Independent Testing Laboratory Results
  - Material Delivery
  - Photographic Record
- QA Documents and Forms
  - Daily Observation Report
  - Photographic Record

SECTION 4

Description of Quality Assurance and Quality Control Testing and Inspection

4.1 General

This section of the CQAP describes the QA/QC testing and inspection for all major elements of the SWMU 3 and SWMU 7b NTCRAs in accordance with the engineering design and specifications. The quality of materials and workmanship will be controlled by the Contractor or supplier who furnishes the work or material involved.

QA personnel will perform observation of verification testing, construction materials, workmanship, and the Contractor's QC activities. Typically, the QA verification testing is performed at a fraction of the frequency of QC testing requirements. Actual QA/QC test frequency is a function of specific construction activities, as outlined in the Contractor's Quality Control Plan and this CQAP. Appropriate test methods and inspection techniques are outlined in the following sections.

All QC testing, sampling, and inspection will be conducted by the Contractor's CQC Manager, the Contractor's supplier, or subcontracted, independent QC testing laboratories. The Contractor will provide the Owner and CQA Manager with copies of QC inspection and testing reports in a timely fashion. These reports will also include documentation of failed tests and corrective actions taken.

4.2 Observation and Verification Testing

The CQA Manager will obtain, review, and become familiar with the applicable procedures, codes, standards, specifications, drawings, observation and verification testing requirements, and notify the Owner of any observed non-compliance.

The CQA Manager will document observations on the daily observation reports. All documentation must be recorded electronically.

Daily observation reports, as a minimum, should contain the following information:

- Observation of verification testing
- Item, condition, or activity observed or tested
- Location of observation or test
- Type of verification test or observation
- Observation or verification test source criteria (drawing, specification, etc.)
- Results or acceptability
- Reference to corrective action taken in connection with each non-conformance

4.3 Construction Specifications

Specifications for construction are presented in the Final (100%) Design Drawings, FY 2012 Maintenance Dredging, Joint Expeditionary Base Little Creek – Teen Piers, Virginia Beach, Virginia, June, 2012 (NAVFAC, 2012).

4.4 Construction Quality Assurance—General

The SWMU 3 and SWMU 7b NTCRAs include the removal and offsite disposal of an estimated 16,100 cy (12,600 cy at SWMU 3 and 3,500 cy at SWMU 7b) of potentially impacted sediment and the placement of a clean sand layer at each site. Specific work elements requiring QA observation during the SWMU 3 and SWMU 7b NTCRAs are mobilization/site preparation, dredging, dewatering, barge decontamination, site restoration, and demobilization. Section 4.4.1 provides a description of each element of the work.

The NTCRAs include four definable features of work (DFOW) in accordance with the Contractor's QC Plan that fall within the work elements specified in this CQAP:

- Installation of turbidity curtain and oil-absorbent boom
- Dredging
- Transportation and disposal of dredged material
- Sand layer placement

Table 4-1 provides a summary of major CQA objectives, field inspection and testing requirements, performance requirements, nonconformance conditions, and corrective action requirements for each DFOW and each of the work elements in Section 4.4.1. CQA personnel should use the information in this section, along with specific details from the drawings and specifications, to verify that the work is being completed satisfactorily.

4.4.1 Work Elements

Mobilization/Site Preparation

Site preparation activities include completion of a pre-removal bathymetric survey to confirm the pre-excavation surface elevations and identify any large anomalies within the removal area. The pre-removal bathymetric survey will be performed by the Navy prior to beginning dredging activities. The survey data will be provided to the Contractor, who will upload the data into the Hypack® DredgePack program to be utilized during dredging operations.

Dredging

Removal of sediment will be performed using a mechanical dredge outfitted with a clamshell bucket specifically designed for environmental sediment removal projects. The dredge will be positioned on a barge to allow for easier movement around Little Creek Harbor and Desert Cove and prevent disturbance to upland activities. Turbidity and sheens in the dredging area will be reduced through use of the environmental clamshell bucket and controlled with turbidity curtains and oil-absorbent booms surrounding the crane barge and scows. Dredged sediment will be loaded onto water-tight scows and staged onsite for dewatering. If any large debris is identified during dredging activities, the debris will be removed and disposed of offsite at the Hampton Roads Recovery Center Centerville Landfill.

Dredge depths will be confirmed in real-time utilizing the Hypack® DredgePack program with Differential Global Positioning System (DGPS) equipment. The Hypack® DredgePack program will be installed in the crane to provide sub-meter positioning accuracy so that the location of each bucket can be accurately determined to ensure all material within each dredge area is removed to the required contract depths. Following completion of dredging, a post-removal bathymetric survey will be completed by the Navy to confirm contract dredging depths were achieved.

Dewatering

Dredged sediment will undergo passive dewatering within water-tight scows for a period of time by allowing solids to settle to the bottom of the scows. The overlying water will be pumped through a filter system located on the barge and discharged into the surrounding water body. The discharge area will be surrounded by turbidity curtains and oil-absorbent booms. Following completion of dewatering, the dredged material will be transported via tugboat-driven barges up the James River for solidification at Port Weanack. Following solidification, the dredged sediment will be sampled for waste characterization. The waste characterization sampling will consist of the following:

- Toxicity characteristic leaching procedure (TCLP) metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), herbicides, pesticides, ignitability, reactivity, corrosivity, polychlorinated biphenyls (PCBs), benzene, toluene, ethylbenzene, and xylenes (BTEX), extractable organic halogen (EOX)/total organic halogens (TOX), and dioxins, conducted at a frequency of 1 per 10,000 cy
- Total petroleum hydrocarbons (TPH), conducted at a frequency of 1 per 2,000 cy

- Paint filter, conducted at a frequency of 1 per 2,000 cy (or one per barge load)

Following completion of the solidification and waste characterization sampling, all dredged material will be transported from Port Weanack to Waste Management Charles City Landfill, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-approved facility for offsite disposal. Offsite transportation and disposal of dredged material will be tracked using non-hazardous waste manifests provided by Waste Management and signed prior to leaving the SWMU 3 and SWMU 7b removal areas. The CQA Manager is not responsible for the dredged sediment once the scow leaves the SWMU 3 and SWMU 7b removal areas. However, the CQA Manager is responsible for observing if the appropriate waste manifesting documents are utilized, filled out correctly, and returned to the Navy certifying disposal.

Barge Decontamination

Following completion of all dredging activities, each scow will be decontaminated in accordance with Drawing V-301 and the specifications (**Attachment A**). Decontamination fluids will be containerized for waste characterization and transported to a Navy and CERCLA-approved disposal facility. If the decontamination takes place onsite, within the SWMU 3 or SWMU 7b removal areas, the CQA will be responsible for observing the decontamination procedure.

Site Restoration

Following completion of the post-removal bathymetric survey, the site will be restored through placement of a clean sand layer across all grid cells in the removal area. Prior to placement, sand will be sampled by the Contractor and sent to the Contractor-retained Laboratory for analysis to determine its suitability for use as clean fill through testing for the analytical methods and American Society of Testing Materials (ASTM) gradation standards on Drawing V-301 (**Attachment A**).

The thickness of the sand layer will be in accordance with Drawing V-301 (**Attachment A**). For both SWMU 3 and SWMU 7b, sand placement will be verified by collecting sediment cores for visual confirmation of thickness at a minimum frequency of 1 core per 2,500 square feet (sq ft) of grid cell area or one core for grid cells less than 2,500 sq ft in area. Photos of each coring showing the thickness of the clean sand layer, labeled with each grid cell location, and including a dimensional reference such as a tape measure or ruler, will be supplied to the government. Following completion of sand placement, a bathymetric survey of the removal areas will be completed by the Navy.

Demobilization

Demobilization includes removal of Contractor facilities and final site cleanup and restoration.

TABLE 4-1
CQA Requirements Table
SWMU 3 and SWMU 7b NTCRAs

Quality Assurance (to be performed by CQA Manager)		Quality Control (to be performed by CQC Manager)				Corrective Measures	
Construction Element	**QA Objective**	**QC Inspection/ Test Description**	**Standard Test Method/ Inspection Method**	**Frequency**	**Minimum Requirements**	**Nonconformance Condition**	**Corrective Measures**
General Construction Activities							
Overall Construction	Verify general construction sequence, methods, and QC	Observe construction operations	No test required	Daily	Work must be done in accordance with the locations, limits details, and requirements in the plans and Specification Section 35 20 23.	Work is not being done in accordance with the plans and specifications.	Contractor must make immediate corrections to non-conforming work. Document non-conformances and corrective measures. Notify QC Manager or FEADof uncorrected work.
Waste Disposal	Verify waste is being properly handled onsite, shipped, and disposed of	Observe waste loading operations Verify disposal locations and documentation	No tests required	Each load	Waste must be properly handled, loaded, shipped, and disposed at locations properly licensed to accept the waste. Transportation and disposal records for off-site disposal must be in order.	Waste disposal records missing Waste not being properly handled or loaded for off-site disposal Waste not being disposed at appropriate disposal site	Contractor must provide required waste transportation and disposal documentation Contractor must immediately correct improper processing, loading, and decontamination procedures Waste must be disposed at approved off-site disposal facilities
Mobilization/Site Preparation							
Site Access	Verify site plan submittal conforms with project specifications	Review upon receipt	No tests required	Upon receipt of submittal	Contractor's site plan must conform with locations and details of the plans and Specification Section 35 20 23	Contractor's site plan does not conform with the plans and Specification Section 35 20 23	Notify NAVFAC of what changes are recommended for conformance
	Verify necessary personnel and equipment have access to the site	Visual Inspection	No tests required	Daily	Appropriate personnel and equipment must be brought to the site to meet work needs	Improper personnel or equipment onsite to do the work	Contractor must provide necessary personnel and equipment to do the work
Environmental Controls (Installation of Turbidity Curtains and Oil-Absorbent Booms)	Verify turbidity curtains and oil-absorbent booms are in installed where designated on drawings, or as otherwise needed to conform with the work	Visual Inspection Photos	No tests required	Prior to dredging and upon each move of the dredging operation, turbidity curtains and oil-absorbent booms must surround the dredging operation at all times	Environmental control materials and measures must conform with locations and details of the plans and Section 35 20 23 Controls must be inspected and maintained per the drawings and specifications	Environmental controls are not installed where shown on site drawings, or as otherwise required, prior to site disturbances Environmental controls are not being properly inspected and maintained	Contractor must immediately install missing controls Contractor must inspect and maintain environmental controls in accordance with project specifications
Pre-Removal Bathymetric Survey	Verify that a pre-removal bathymetric survey is completed	Visual Inspection and verification of survey deliverable	No tests required	Once, prior to dredging	Pre-Removal Bathymetric survey showing the existing conditions of the removal areas completed in accordance with Specification Section 35 20 23	Survey not completed prior to dredging	Contractor must complete pre-removal bathymetric survey prior to dredging

TABLE 4-1
CQA Requirements Table
SWMU 3 and SWMU 7b NTCRAs

Quality Assurance (to be performed by CQA Manager)		Quality Control (to be performed by CQC Manager)				Corrective Measures	
Construction Element	**QA Objective**	**QC Inspection/ Test Description**	**Standard Test Method/ Inspection Method**	**Frequency**	**Minimum Requirements**	**Nonconformance Condition**	**Corrective Measures**
Debris Sweep	Verify that a debris sweep is performed if any large debris is identified during pre-removal bathymetric survey	Visual inspection	No tests required	Once, prior to dredging (if needed)	Debris sweep completed to remove any large debris	Large debris identified during pre-removal bathymetric survey and no debris sweep completed	Contractor performs debris sweep or provides documentation that NAVFAC has given the Contractor permission to proceed without the debris sweep
Dredging							
Debris Disposal Arrangement	Verify an approved off-site landfill or recycling facility is selected for debris disposal and is capable of accepting debris generated.	Verification of waste acceptance forms	No tests required	Prior to the start of work	Disposal facility must be able to accept debris generated from debris removal	Selected disposal facility is not approved to accept debris generated from debris removal	Contractor must find a disposal facility that meets necessary requirements for the disposal of debris generated from debris removal
Dredge Depth Verification	Verify that the Hypack® DredgePack program is utilized to verify the dredge depths	Visual Inspection and verification of use of Hypack® DredgePack program	No tests required	During dredging	Hypack® DredgePack program is being utilized during dredging activities to verify the vertical and horizontal extents of dredging	Hypack® DredgePack program is not being utilized and there is no method of confirming the vertical and horizontal extents of dredging	Contractor must use the Hypack® DredgePack to provide real-time data on the horizontal and vertical extents of sediment removed during dredging
Dewatering							
Scows	Verify that scows are water-tight	Visual inspection	No tests required	During dredging	Water-tight scows are needed to control the dewatering activities and ensure that dredged sediment is not being released back into the water body	Scows are not water-tight	Contractor must provide a method for ensuring that the scows are water-tight
Overlying Water Removal	Verify that overlying water is pumped through filter system on barge	Visual inspection	No tests required	During dredging	Overlying water is pumped through filter system and into surrounding water body	Overlying water not pumped through filter system	Contractor will pump overlying water through the filter system prior to discharge into the surrounding water body
					Discharge location is within the turbidity curtain	Discharge location is not within the turbidity curtain	Turbidity curtain will surround the discharge location
Transportation and Disposal							
Dredged Material Disposal Agreement	Verify an approved off-site disposal facility is selected for dredged sediment disposal and is capable of accepting sediment generated	Verification of waste acceptance forms	No tests required	Prior to the start of dredging	Disposal facility must be able to accept dredged sediment	Selected disposal facility is not approved to receive the dredged sediment	Contractor must find a disposal facility that meets necessary requirements for the disposal of the sediment

TABLE 4-1
CQA Requirements Table
SWMU 3 and SWMU 7b NTCRAs

Quality Assurance (to be performed by CQA Manager)		Quality Control (to be performed by CQC Manager)				Corrective Measures	
Construction Element	**QA Objective**	**QC Inspection/ Test Description**	**Standard Test Method/ Inspection Method**	**Frequency**	**Minimum Requirements**	**Nonconformance Condition**	**Corrective Measures**
Transport and Disposal of Dredged Sediment	Verify dredged material is being hauled appropriately and being sent to the correct disposal facility	Visual Inspection Check what disposal facility the dredged sediment is being sent to Check waste ticket from disposal facility accepting waste	No tests required	Prior to shipping waste to the disposal facility After barges return from disposal facility	Waste generated by the dredging operation must be transported to an off-site disposal facility designed to accept CERCLA waste	The waste generated by the dredging is left on-site	Contractor must have the waste sent to the appropriate offsite disposal facility
Barge Decontamination							
Scow Decontamination	If performed onsite, verify that each scow is decontaminated following completion of all dredging activities	Visual inspection if performed onsite	No test required	Once per scow following completion of dredging activities	Each scow is decontaminated following completion of all dredging activities and the decontamination fluids are containerized for sampling and offsite disposal	Scows are not being decontaminated or decontamination fluids are not being containerized	Contractor must decontaminate each scow upon completion of all dredging activities and containerize the decontamination fluids
Dredging Equipment Decontamination	If performed onsite, verify that dredging equipment is decontaminated following completion of all dredging activities	Visual inspection if performed onsite	No test required	Once per piece of dredging equipment following completion of dredging activities at SMWU 3 and once for SWMU 7b	Dredging equipment is decontaminated following completion of dredging activities at each SWMU and the decontamination fluids are containerized for sampling and offsite disposal	Dredging equipment is not being decontaminated or decontamination fluids are not being containerized	Contractor must decontaminate dredging equipment upon completion of all dredging activities and containerize the decontamination fluids
Waste Characterization Sampling	Verify that waste characterization is being completed prior to transporting the decontamination fluids offsite	Visual inspection of testing and verification of analytical results	Sampling in accordance with the disposal facility requirements	Frequency in accordance with the disposal facility requirements	Analytes and frequency in accordance with the disposal facility requirements	Sampling is not being performed prior to offsite transportation or is not being performed to meet the minimum requirements of the disposal facility	Contractor must collect waste characterization samples to meet the minimum requirements of the disposal facility
Decontamination Fluids Disposal Agreement	Verify an approved off-site disposal facility is selected for decontamination fluids disposal and is capable of accepting the decontamination fluids generated	Verification of waste acceptance forms	No tests required	Prior to the offsite disposal of decontamination fluids	Disposal facility must be able to accept decontamination fluids	Selected disposal facility is not approved to receive the decontamination fluids	Contractor must find a disposal facility that meets necessary requirements for the disposal of the decontamination fluids

TABLE 4-1
CQA Requirements Table
SWMU 3 and SWMU 7b NTCRAs

Quality Assurance (to be performed by CQA Manager)		Quality Control (to be performed by CQC Manager)				Corrective Measures	
Construction Element	**QA Objective**	**QC Inspection/ Test Description**	**Standard Test Method/ Inspection Method**	**Frequency**	**Minimum Requirements**	**Nonconformance Condition**	**Corrective Measures**
Transport and Disposal of Decontamination Fluids	Verify decontamination fluids are being hauled appropriately and being sent to the correct disposal facility	Visual Inspection Check what disposal facility the decontamination fluids are being sent to Check waste ticket from disposal facility accepting waste	No tests required	Prior to shipping waste to the disposal facility Upon receipt of waste ticket(s)	Waste generated by the barge decontamination operation must be transported to an off-site disposal facility designed to accept CERCLA waste	The waste generated by the decontamination is left on-site	Contractor must have the waste sent to the appropriate offsite disposal facility
Site Restoration							
Analytical Testing of Sand Source	Verify that the sand selected is suitable for use as clean fill	Verification of analytical and gradation testing of sand	Testing in accordance with Section 4.10	Once per source	See Drawing V-301 (**Attachment A**)	Analytical and gradation testing results do not meet the minimum requirements shown in Drawing V-301 (**Attachment A**)	Contractor must provide a source of sand that meets the analytical and gradation requirements shown in Drawing V-301 (**Attachment A**)
Sand Layer Placement	Verify that sand layer placement is being completed in dredged areas	Visual inspection	Collecting sediment cores for visual confirmation of thickness	One core per 2,500 sq ft of grid cell area or one core for grid cells less than 2,500 sq ft in area	Sand layer thickness will meet the requirements listed in Drawing V-301 (**Attachment A**)	Sediment cores show that sand layer does not meet the minimum thickness within a grid cell	Contractor shall place additional sand in that grid cell and an additional sediment core will be collected to verify the sand layer thickness
Final Bathymetric Survey	Verify that a final bathymetric survey is completed	Visual Inspection and verification of survey deliverable	No tests required	Following completion of sand layer placement and prior to demobilization	Final bathymetric survey showing the conditions of the removal areas after the sand layer placement is completed in accordance with Specification Section 35 20 23.	Survey not completed following completion of the sand layer placement	Contractor must complete final bathymetric survey once the sand layer placement is complete
Demobilization							
Removal of Contractor Facilities, Equipment, and Materials	Verify temporary facilities and construction equipment, and materials are removed from the site	Visual Inspection	No tests required	After completion of the final bathymetric survey and approval from NAVFAC that the work is complete	Temporary facilities, construction equipment, and materials must be taken off-site	Temporary facilities, construction equipment, and materials are left on-site	Remove temporary facilities, construction equipment, and materials as soon as possible

SECTION 5

Final Project Completion Summary Memorandum Requirements

Following completion of the NTCRAs, the Contractor will provide the Navy with all reporting documents, including waste manifest, weight tickets, load tickets for debris disposal (if any), daily production reports, and QC reporting documents. The CQA Manager will be responsible for ensuring that, at a minimum, the following information is obtained (electronically or hardcopy) and electronic copies of the information are placed on the CH2M HILL server for inclusion in and to facilitate completion of a Construction Summary Technical Memorandum to be completed by CH2M HILL, in their role as the NAVFAC Mid-Atlantic contractor.

- Contractor's Daily Reports
- Pre-, intermediate, post-removal, and final bathymetric survey reports
- Results of the pre-dredge debris sweep (if performed)
- Transportation and disposal records for dredged sediment and fluids from barge decontamination
- Quantity of sand delivered (verified by delivery slips)
- Results from sediment cores used to verify sand layer thickness
- Health and safety summaries (i.e. incident reports, daily safety meeting minutes,)
- Analytical results for the following:
  - Dredged material waste characterization
  - Barge decontamination fluids
  - Sand for placement across dredged areas
- Exposure monitoring/air sampling results (may include turbidity, water quality, and noise monitoring)
- Any photographs taken documenting work progression
- Documentation of equipment inspections
- Any submittals generated by the Contractor during completion of the NTCRAs

SECTION 6

References

Bay Environmental. 2012. *Environmental Protection Plan FY 2012 Maintenance Dredging JEB Little Creek Teen Piers.* October.

CH2M HILL. 2012. *Final Engineering Evaluation/Cost Analysis for Solid Waste Management Unit 3 Pier 10 Sandblast Yard, Joint Expeditionary Base Little Creek, Virginia Beach, Virginia*. December.

CH2M HILL. 2013. *Final Engineering Evaluation/Cost Analysis for Solid Waste Management Unit 7b Small Boats Sandblast Yard, Joint Expeditionary Base Little Creek, Virginia Beach, Virginia*. January.

McLean Contracting Company (McLean). 2012. *Quality Control Plan FY 2012 Maintenance Dredging, Joint Expeditionary Base Little Creek – Teen Piers, Virginia Beach, Virginia*. October.

McLean. 2013. Dredge Work Plan, *FY 2012 Maintenance Dredging, Joint Expeditionary Base Little Creek – Teen Piers, Virginia Beach, Virginia.* January.

NAVFAC. 2012. *Final (100%) Design Drawings, FY 2012 Maintenance Dredging, Joint Expeditionary Base Little Creek – Teen Piers, Virginia Beach, Virginia*. June.

Attachment A
Drawings and Specifications

eProjects WO#: 1128364

FINAL SUBMISSION

FY-2012 MAINTENANCE DREDGING

at the

JEB LITTLE CREEK TEEN PIERS, NORFOLK, VIRGINIA

DESIGNED BY:

NAVFAC MID-ATLANTIC; Capital Improvements
Core Hydrographic Branch
9742 MARYLAND AVENUE
NORFOLK, VIRGINIA 23511-3095

SPECIFICATION PREPARED BY:

Hydrographic: Lee Pennypacker

Date: June 14, 2012

SPECIFICATION APPROVED BY:

Lead Discipline Branch Manager:	James S. Georgo, P.E.
Project Manager:	Dane Wray, E.I.T.
Director of Engineering:	Joseph R. Formato, P.E.

For Commander, NAVFAC MID-ATLANTIC: _____

James S. Georgo, P.E. Date

PROJECT TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

00 01 15.00 22 LIST OF DRAWINGS
lists the drawings for the project

00 41 00 BID SCHEDULES
unit prices, additive and deductive bid items, and options

DIVISION 01 - GENERAL REQUIREMENTS

01 11 00 SUMMARY OF WORK
a description of work covered in this contract and is required for use in all projects

01 14 00 WORK RESTRICTIONS
work and site restrictions

01 20 00.00 20 PRICE AND PAYMENT PROCEDURES
payment instruction paragraphs required for use in all projects

01 22 00.00 10 MEASUREMENT AND PAYMENT
lump sum schedule payment items and unit price schedule payment items

01 30 00 ADMINISTRATIVE REQUIREMENTS
general administrative paragraphs

01 32 01.00 10 PROJECT SCHEDULE
the preparation and maintenance of the project schedule for construction projects or design-build construction projects

01 33 00 SUBMITTAL PROCEDURES

01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS
safety and occupational health requirements for the protection of Contractor and Government personnel, property and resources

01 35 29.13 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES
safety and health documents and procedures for hazardous waste site cleanup projects

01 35 40.00 20 ENVIRONMENTAL MANAGEMENT
responsibilities and requirements regarding environmental management

01 42 00 SOURCES FOR REFERENCE PUBLICATIONS
listing of organizations whose publications are referenced in other sections of the specifications.

01 45 02 NAVFAC QUALITY CONTROL

01 57 20.00 10 ENVIRONMENTAL PROTECTION

environment protection during construction activities

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

35 20 23 DREDGING
dredging

-- End of Project Table of Contents --

SECTION TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DOCUMENT 00 01 15.00 22

LIST OF DRAWINGS

07/06

lists the drawings for the project

PART 1 GENERAL

1.1 SUMMARY
1.2 CONTRACT DRAWINGS
1.2.1 Drawing Numbers and Titles
1.2.2 Boring Logs
1.3 SUPPLEMENTARY INFORMATION
1.3.1 Subsurface Data

-- End of Section Table of Contents --

DOCUMENT 00 01 15.00 22

LIST OF DRAWINGS
07/06

PART 1 GENERAL

1.1 SUMMARY

This document lists the drawings for the project pursuant to Contract Clause "DFARS 252.236-7001, Contract Drawings, Maps and Specifications."

1.2 CONTRACT DRAWINGS

1.2.1 Drawing Numbers and Titles

Contract drawings are as follows:

SHEET NO.	NAVFAC DWG NO.	SHEET TITLE
V-001	12619966	TITLE SHEET AND PLAN VIEWS
V-002	12619967	DREDGE VOLUMES AND CROSS SECTIONS
V-101	12619968	BATHYMETRY: PIERS 18 AND 19
V-102	12619969	MARINA/DRY DOCK AREA (BID OPTION #1)
V-201	12619970	DREDGE LIMITS: PIERS 18 AND 19
V-301	12619971	DREDGED MATERIAL MANAGEMENT NARRATIVE

1.2.2 Boring Logs

The Government does not guarantee that borings indicate actual conditions, except for the exact locations and the time that they were made.

1.3 SUPPLEMENTARY INFORMATION

1.3.1 Subsurface Data

Subsurface data, not specified or indicated, have been obtained by the Government at the station. Sediment Sampling and Testing Report is attached in Appendix "C".

-- End of Document --

SECTION TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 00 41 00

BID SCHEDULES

01/07

unit prices, additive and deductive bid items, and options

PART 1 GENERAL

1.1 BASIS OF BIDS
1.1.1 Unit Price Schedule

-- End of Section Table of Contents --

SECTION 00 41 00

BID SCHEDULES
01/07

PART 1 GENERAL

1.1 BASIS OF BIDS

1.1.1 Unit Price Schedule

This contract will be awarded as one lump sum with unit prices required for specifically selected work. A schedule of the unit price work is contained in Standard Form SF 1442, "Solicitation, Offer and Award." See Contract Clauses, "FAR 52.211-18, Variation in Estimated Quantity" and "FAR 52.236-16, Quantity Surveys," "DFARS.236-7008, Contract Prices."

Unit Prices Form

N[_____]-[__]-B-[____]

(i) Basis of Bid for Item 0001 shall be the Total Amount for Item 1 (Items 1a through 1d), complete in accordance with the drawings and specifications.

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0001a	Mobilization and Demobilization	1	LS	$_____	$_____
0001b	Bucket dredging of areas "A", "B" and "C", using a sealed "environmental" bucket, in accordance with the drawings and specifications, including transportation of dredged material via scow or barge to the Port Weanack Dredged Material Handling Facility.	46,386	CY	$_____	$_____
0001c	In barge addition & mixing of solidifying/drying agent, offload from barge to truck and transport to Charles City Landfill for disposal.	46,386	CY	$_____	$_____
0001d	Downtime	100	Hrs	$_____	$_____
				Total Amount for Bid Item 0001	$_____

Unit Prices Form

(ii) Item 0002: Bid Option 1:

Option 1 may be exercised at the time of award or within 120 calendar days after award by the Contracting Officer. A firm fixed price is required for the option. No provision is made for economic price adjustment. Method for evaluation of bids for award purposes is specified below.

Basis of Bid for Item 0002, the Contractor shall bid the amount specified for the addition of work specified in Iems 0002a, 0002b and 0002c.

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
0002a	Bucket dredging of areas 01 through 16, using a sealed "environmental" bucket, in accordance with the drawings and specifications, including transportation of dredged material via scow or barge to the Port Weanack Dredged Material Handling Facility.	12,728	CY	$_____	$_____
0002b	In barge addition & mixing of solidifying/drying agent, offload from barge to truck and transport to Charles City Landfill for disposal.	12,728	CY	$_____	$_____
0002c	Clean, medium grain sand fill placed over dredge areas 01 thru 16 in accordance the drawings and specifications	6,960	CY	$_____	$_____
			Total Amount for Bid Item 0002		$_____
			Total Amount for Bid Item 0001 + Bid Item 0002		$_____

-- End of Document --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF WORK

01/08

a description of work covered in this contract and is required for use in all projects

PART 1 GENERAL

1.1 REFERENCES
1.2 DEFINITIONS
1.3 SUBMITTALS
1.4 WORK COVERED BY CONTRACT DOCUMENTS
1.4.1 Project Description
1.5 CONTRACT DRAWINGS
1.6 COMMENCEMENT OF WORK
1.7 WORK RESCHEDULING
1.8 PROJECT ENVIRONMENTAL GOALS

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 11 00

SUMMARY OF WORK
01/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E 2114	(2006a) Standard Terminology for Sustainability Relative to the Performance of Buildings

1.2 DEFINITIONS

Definitions pertaining to sustainable development are as defined in ASTM E 2114, Section 01 35 40.00 20 ENVIRONMENTAL MANAGEMENT Section 01 57 20.00 10 ENVIRONMENTAL PROTECTION], and as specified.

a. "Environmentally preferable products" have a lesser or reduced effect on the environment in comparison to conventional products and services. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product.

b. "Indoor environmental quality" is the physical characteristics of the building interior that impact occupants, including air quality, illumination, acoustics, occupant control, thermal comfort, daylighting, and views.

c. "Operational performance" is the functional behavior of the building as a whole or of the building components.

d. "Sustainability" is the balance of environmental, economic, and societal considerations.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

1.4 WORK COVERED BY CONTRACT DOCUMENTS

1.4.1 Project Description

The work includes bucket dredging of mud and silt material using a sealed "environmental" bucket, placed into a barge or scow, transported to the Port Weanack Dredge Material Handling Facility, receive in-barge addition

and mixing of solidifying/drying agent, offloaded from barge into trucks and transported for disposal to the Charles City Landfill, Charles City County, VA.

1.5 CONTRACT DRAWINGS

The following drawings accompany this specification and are a part thereof.

NAVFAC Drawing Nos. 12619966 to 12619971
Sheets 1 through 6

Reference publications will not be furnished.

Contractor shall immediately check furnished drawings and notify the Government of any discrepancies.

1.6 COMMENCEMENT OF WORK

Contractor shall proceed with mobilization and dredging no later than 30 days after Notice to Proceed.

1.7 WORK RESCHEDULING

Contractor shall allow for maximum of 100 hours where dredging activity is prohibivite. Government shall notify Contractor 72 hours in advance as to any ship moviements in the area where dredging is being conducted.

Normal duty hours for work shall be 24 hours a day, Sunday through Saturday.

1.8 PROJECT ENVIRONMENTAL GOALS

Contractor shall distribute copies of the Environmental Goals to each subcontractor and the Contracting Officer. The overall goal for design, dredging, and operation is to produce a result that meets the functional program needs and incorporates the principles of sustainability. Specifically:

a. Preserve and restore the site ecosystem and biodiversity; avoid site degradation and erosion. Minimize offsite environmental impact.

b. Use the minimum amount of energy, water, and materials feasible to meet the design intent. Select energy and water efficient equipment and strategies.

c. Use environmentally preferable products and decrease toxicity level of materials used.

d. Use renewable energy and material resources.

e. Optimize operational performance (through commissioning efforts) in order to ensure energy efficient equipment operates as intended. Consider the durability, maintainability, and flexibility of building systems.

f. Reduce dredging waste through reuse, recycling, and supplier take-back.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

SPECIFICATION COVER SHEET

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 14 00

WORK RESTRICTIONS

07/07

work and site restrictions

PART 1 GENERAL

1.1 SUBMITTALS
1.2 SPECIAL SCHEDULING REQUIREMENTS
1.3 CONTRACTOR ACCESS AND USE OF PREMISES
1.3.1 Activity Regulations
1.3.1.1 Subcontractors and Personnel Contacts
1.3.1.2 Identification Badges and Installation Access

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 14 00

WORK RESTRICTIONS
07/07

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval and for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Pier parking authorization; G

List of Contact Personnel; G

Personnel List; G

Vehicle List; G

Dredge Plans; G

Dredge plans to show progressive positioning of barges, scows, tender boats, etc.

1.2 SPECIAL SCHEDULING REQUIREMENTS

Have materials, equipment, and personnel required to perform the work at the site prior to the commencement of the work.

b. The Little Creek Amphibious Base waterfront will remain in operation during the entire dredging period. The Contractor shall conduct his operations so as to cause the least possible interference with normal operations of the activity.

c. Permission to interrupt any Activity roads, railroads, and/or utility service shall be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

d. The work under this contract requires special attention to the scheduling and conduct of the work in connection with existing operations. Identify on the dredging schedule each factor which constitues a potential interruption to operations.

The following conditions apply:

(1) Existing Ship Movement

(2) Maritime Traffic

1.3 CONTRACTOR ACCESS AND USE OF PREMISES

1.3.1 Activity Regulations

1.3.1.1 Subcontractors and Personnel Contacts

Furnish a list of contact personnel of the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency. As changes occur and additional information becomes available, correct and change the information contained in previous lists.

1.3.1.2 Identification Badges and Installation Access

Application for and use of badges will be as directed. Obtain access to the installation by participating in the Navy Commercial Access Control System (NCACS), or by obtaining passes each day from the Base Pass and Identification Office. Costs for obtaining passes through the NCACS are the responsibility of the Contractor. One-day passes, issued through the Base Pass and Identification Office, will be furnished without charge. Furnish a completed EMPLOYMENT ELIGIBILITY VERIFICATION (DHS FORM I-9) form for all personnel requesting badges. This form is available at http://www.uscis.gov/portal/site/uscis by searching or selecting Employment Verification (Form I-9). Immediately report instances of lost or stolen badges to the Contracting Officer.

a. NCACS Program: NCACS is a voluntary program in which Contractor personnel who enroll, and are approved, are subsequently granted access to the installation for a period up to one year, or the length of the contract, whichever is less, and are not required to obtain a new pass from the Base Pass and Identification Office for each visit. The Government performs background screening and credentialing. Throughout the year the Contractor employee must continue to meet background screening standards. Periodic background screenings are conducted to verify continued NCACS participation and installation access privileges. Under the NCACS program, no commercial vehicle inspection is required, other than for Random Anti-Terrorism Measures (RAM) or in the case of an elevation of Force Protection Conditions (FPCON). Information on costs and requirements to participate and enroll in NCACS is available at http://www.rapidgate.com/vendors/how-to-enroll or by calling 1-877-727-4342. Contractors should be aware that the costs incurred to obtain NCACS credentials, or costs related to any means of access to a Navy Installation, are not reimbursable. Any time invested, or price(s) paid, for obtaining NCACS credentials will not be compensated in any way or approved as a direct cost of any contract with the Department of the Navy.

b. One-Day Passes: Participation in the NCACS is not mandatory, and if the Contractor chooses to not participate, the Contractor's personnel will have to obtain daily passes, be subject to daily mandatory vehicle inspection, and will have limited access to the installation. The Government will not be responsible for any cost or lost time associated with obtaining daily passes or added vehicle inspections incurred by non-participants in the NCACS.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 20 00.00 20

PRICE AND PAYMENT PROCEDURES

07/06

payment instruction paragraphs required for use in all projects

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 SCHEDULE OF PRICES
1.3.1 Data Required
1.4 CONTRACT MODIFICATIONS
1.5 CONTRACTOR'S INVOICE
1.5.1 Content of Invoice
1.5.2 Quantities of Monthly Invoices and Supporting Forms
1.6 PAYMENTS TO THE CONTRACTOR
1.6.1 Obligation of Government Payments
1.7 EQUITABLE ADJUSTMENTS: WAIVER AND RELEASE OF CLAIMS
1.8 CHANGE ESTIMATES

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 20 00.00 20

PRICE AND PAYMENT PROCEDURES
07/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EP-1110-1-8	(2005) Construction Equipment Ownership and Operating Expense Schedule, Vol 1-12

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Schedule of prices; G

1.3 SCHEDULE OF PRICES

1.3.1 Data Required

Provide a detailed breakdown of the contract price, giving quantities for each of the various kinds of work, unit prices, and extended prices therefore in accordance with the bid schedule.

1.4 CONTRACT MODIFICATIONS

In conjunction with the Contract Clause "DFARS 252.236-7000, Modification Proposals-Price Breakdown," and where actual ownership and operating costs of construction equipment cannot be determined from Contractor accounting records, equipment use rates shall be based upon the applicable provisions of the EP-1110-1-8.

1.5 CONTRACTOR'S INVOICE

1.5.1 Content of Invoice

Request for payment in accordance with the terms of the contract shall include the following: If NFAS Clause 5252.232-9301 is present in the contract, documents shall be provided as attachments in Wide Area Workflow (WAWF). The maximum size limit of each attachment is less than 2 megabytes, but there are no limits to the number of attachments. If a document cannot be attached to WAWF due to system or size restrictions it shall be provided as instructed by the Contracting Officer.

a. Contractor's Invoice on NAVFAC Form 7300/30, which shall show, in summary form, the basis for arriving at the amount of the invoice.

b. Contractor's Monthly Estimate for Voucher (LANTNAVFACENGCOM Form 4-4330/110 (New 7/84)), with subcontractor and supplier payment certification.

c. Affidavit to accompany invoice (LANTDIV NORVA Form 4-4235/4 (Rev. 5/81)).

d. Updated copy of submittal register.

e. Updated copy of progress schedule. Furnish as specified in "FAR 52.236-15, Schedules for Construction Contracts."

g. Include Contractor's Final Release Form. Final invoice shall be accompanied by the Final Release Form. If the Contractor is incorporated, the release shall contain the corporate seal. An officer of the corporation shall sign the release and the corporate secretary shall certify the release.

For final invoices being submitted via WAWF, the original Contractor's Final Release Form must be provided directly to the respective Contracting Officer prior to submission of the final invoice.

Once receipt of the original Final Release Form has been confirmed by the Contracting Officer, the Contractor shall then its submit final invoice and attach a copy of the Final Release Form in WAWF.

1.5.2 Quantities of Monthly Invoices and Supporting Forms

Forms will be furnished by the Contracting Officer. Requests for payment shall be processed in accordance with FAR 52.232-5, Payments Under Fixed-Price Construction Contracts.

Monthly invoices and supporting forms for work performed through the anniversary award date of the contract shall be submitted to the Contracting Officer within 5 calendar days of the date of invoice For example, contract award date is the 7th of the month, the date of each monthly invoice shall be the 7th and the invoice shall be submitted by the 12th of the month.

Forms shall be submitted electronically via WAWF if NFAS clause 5252.232-9301 is specified in the contract. Otherwise, the forms shall be submitted in accordance with contract invoicing instructions

a. Contractor's invoice - Original and five copies

b. Contractor's monthly estimate for voucher - Original and two copies shall be required on jobs where there is a schedule of prices

c. Affidavit - Original

d. Updated submittal register - Two copies

e. Progress schedule - Two copies

g. Contractor Safety Self Evaluation Checklist (original)

h. Final release (for Final Payment only)

1.6 PAYMENTS TO THE CONTRACTOR

Payments will be made on submission of itemized requests by the Contractor which comply with the requirements of this section, and will be subject to reduction for overpayments or increase for underpayments made on previous payments to the Contractor.

1.6.1 Obligation of Government Payments

The obligation of the Government to make payments required under the provisions of this contract will, at the discretion of the Contracting Officer, be subject to reductions and/or suspensions permitted under the FAR and agency regulations including the following in accordance with "FAR 32.503-6:

a. Reasonable deductions due to defects in material or workmanship;

b. Claims which the Government may have against the Contractor under or in connection with this contract;

c. Unless otherwise adjusted, repayment to the Government upon demand for overpayments made to the Contractor; and

d. Failure to provide up to date record drawings not current as stated in Contract Clause "FAC 5252.236-9310, Record Drawings."

1.7 EQUITABLE ADJUSTMENTS: WAIVER AND RELEASE OF CLAIMS

a. Whenever the Contractor submits a claim for equitable adjustment under any clause of this Contract which provides for equitable adjustment of the Contract, such claim shall include all types of adjustments in the total amounts to which the clause entitles the Contractor, including, but not limited to, adjustments arising out of delays or disruptions or both caused by such change.

b. Except as the parties may otherwise expressly agree, the Contractor shall be deemed to have waived (1) any adjustments to which it otherwise might be entitled under the clause where such claim fails to request such adjustments, and (2) any increase in the amount of equitable adjustments additional to those requested in its claim.

c. The Contractor agrees that, if required by the Contracting Officer, he will execute a release, in form and substance satisfactory to the Contracting Officer, as part of the supplemental agreement setting forth the aforesaid equitable adjustment. The Contractor further agrees that such release shall discharge the Government, its officers, agents and employees, from any further claims, including but not limited to, further claims arising out of delays or disruptions or both caused by the aforesaid change.

1.8 CHANGE ESTIMATES

In making all equitable adjustments under the Changes Clause, compensation for additions will be based upon estimated costs at the time the work is performed and credit for deductions will be based upon estimated costs at the time the Contract was made. In arriving at the amount of the change in

price, if any, allowance may be made for profit overhead and general expenses, plant rental and other similar items.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 22 00.00 10

MEASUREMENT AND PAYMENT

04/06

lump sum schedule payment items and unit price schedule payment items

PART 1 GENERAL

1.1 SUBMITTALS
1.2 LUMP SUM PAYMENT ITEMS
1.2.1 Mobilization and Demobilization
1.2.1.1 Payment
1.2.1.2 Unit of Measure
1.3 UNIT PRICE PAYMENT ITEMS
1.3.1 Dredging and Upland Disposal
1.3.1.1 Payment
1.3.1.2 Measurement
1.3.1.3 Unit of Measure

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01 22 00.00 10

MEASUREMENT AND PAYMENT
04/06

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.

1.2 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.2.1 Mobilization and Demobilization

1.2.1.1 Payment

Payment will be made for costs associated with mobilization and demobilization, as defined in Special Clause PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.

1.2.1.2 Unit of Measure

Unit of measure: lump sum.

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

1.3.1 Dredging and Upland Disposal

1.3.1.1 Payment

Payment will be made for costs associated with bucket dredging of required

dredge area as shown on Dredging Plans which includes performing required operations incidental thereto.

1.3.1.2 Measurement

The total quantity of dredged material for which payment will be made will be measured by the cubic yard in place by computing the volume between the bottom surface shown by soundings of the last surveys made by the government before dredging, and the bottom surface shown by the soundings of surveys made by the government after the work has been completed. Allowance will be made for overdepth dredging as indicated on the contract drawings. No allowance will be made for the removal of any material outside the required slope lines or outside and beyond overdredge depths, unless authorized.

1.3.1.3 Unit of Measure

Unit of measure: cubic yard.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

02/10

general administrative paragraphs

PART 1 GENERAL

1.1 SUBMITTALS
1.2 MINIMUM INSURANCE REQUIREMENTS
1.2.1 Additional Insurance Requirements
1.3 CONTRACTOR PERSONNEL REQUIREMENTS
1.3.1 Subcontractors and Personnel
1.3.2 Identification Badges
1.3.3 Contractor Personnel Requirements
1.3.4 Personnel List
1.3.5 Citizenship Requirements
1.3.6 Documents Acceptable for Proof of Citizenship
1.3.7 Vehicle List
1.3.8 Passes
1.3.9 Control
1.4 SUPERVISION
1.5 PRECONSTRUCTION CONFERENCE
1.6 FACILITY TURNOVER PLANNING MEETINGS (NAVFAC Red Zone - NRZ)
1.7 AVAILABILITY OF CADD AND HYPACK DRAWING FILES
1.8 ELECTRONIC MAIL (E-MAIL) ADDRESS

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS
02/10

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

List of contact personnel; G

Personnel list; G

Vehicle list; G

Statement of Acknowledgement Form SF 1413

1.2 MINIMUM INSURANCE REQUIREMENTS

Procure and maintain during the entire period of performance under this contract the following minimum insurance coverage:

a. Comprehensive general liability: $500,000 per occurrence

b. Automobile liability: $200,000 per person, $500,000 per occurrence for bodily injury, $20,000 per occurrence for property damage

c. Workmen's compensation as required by Federal and State workers' compensation and occupational disease laws.

d. Employer's liability coverage of $100,000, except in States where workers compensation may not be written by private carriers,

e. Others as required by State law.

1.2.1 Additional Insurance Requirements

a. Before commencing work under this contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

b. The Contractor shall insert the substance of this clause, including this paragraph b., in subcontracts under this contract that require work on a Government installation and shall make copies available to the Contracting Officer upon request.

1.3 CONTRACTOR PERSONNEL REQUIREMENTS

1.3.1 Subcontractors and Personnel

Furnish a list of contact personnel of the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency. As changes occur and additional information becomes available, correct and change the information contained in previous lists.

1.3.2 Identification Badges

Identification badges, if required, will be furnished without charge. Application for and use of badges will be as directed. Immediately report instances of lost or stolen badges to the Contracting Officer.

Identification badges will be issued to the Contractor and his employees in accordance with Little Creek Amphibious Base Security Regulations. A copy of the security regulations may be obtained from the security office. Failure to obtain entry approval will not affect the contract price or time of completion.

1.3.3 Contractor Personnel Requirements

The Contractor shall:

a. Certify in writing that all employees and representatives requiring access are US citizens.

b. Ensure strict accountability over all identification badges and passes issued by the Pass & ID office.

c. Return all badges and passes upon expiration of the badge, contract, or termination of an employee.

d. Immediately report instances of lost or stolen badges to the Contracting Officer.

1.3.4 Personnel List

Submit for approval, at least 15 days prior to the desired date of entry, an original alphabetical list of personnel who require entry into Government property to perform work on the project. Furnish for each person:

a. Name

b. Date and place of birth

c. Citizenship

d. Home address

e. Social security number

f. Current pass expiration date

g. Naturalization [or Alien Registration] number

h. Passport number, place of issue, and expiration date

i. The request for personnel passes shall be accompanied with the following certification:

"I hereby certify that all personnel on this list are either born U.S. citizens, naturalized U.S. citizens with the naturalization number shown, or legal aliens with the alien registration number indicated."

Signature/Firm Name

1.3.5 Citizenship Requirements

Non US citizens will not be admitted to the work site without prior approval. Clearance for non US citizens may require approximately 20 work days for approval.

1.3.6 Documents Acceptable for Proof of Citizenship

a. Birth registration card

b. Certificate of live birth, birth certificate

c. Certificate of Naturalization

d. DD-214 (Must Cite Birthplace)

e. DD Form 4 (Contract for Enlistment and Must Cite Birthplace)

f. Active/Retired Military ID card

g. US passport

1.3.7 Vehicle List

Submit an original list of vehicles to be utilized at the work site with the following information for each vehicle:

a. Make

b. Year

c. Model

d. License number

e. Registered owner

f. Current DOD Facility/Installation pass expiration date.

1.3.8 Passes

Submit request for personnel and vehicle passes together. Include the Certificate of Insurance for Contractor and Subcontractor(s) and the

Statement of Acknowledgement Form SF 1413 with the submittal. Passes will normally be issued within 21 days.

Obtain a blank vehicle pass from the Naval Station Norfolk, Pass & ID Office and complete and submit it to the Contracting Officer for processing. Include with the submittal, a Certificate of Insurance for Contractor and Subcontractor(s), the Statement of Acknowledgement Form SF 1413 (for Subcontractors only), a Vehicle List, and a Personnel List with Citizenship. Passes will normally be issued within 21 calendar days.

1.3.9 Control

Maintain strict accountability over passes. Immediately report to the source of issue, passes missing or lost and the circumstances. If the Contractor has another active contract or one commencing immediately, employees' names may be transferred from one contract to the other. Final payment will not be effected until employees are transferred to another contract or the records are cleared. Furnish a signed letter, countersigned by the source of issue, stating that passes have been turned in.

1.4 SUPERVISION

Have at least one qualified supervisor capable of reading, writing, and conversing fluently in the English language on the job site during working hours. In addition, if a Quality Control (QC) representative is required on the contract, then that individual shall also have fluent English communication skills.

1.5 PRECONSTRUCTION CONFERENCE

After award of the contract but prior to commencement of any work at the site, meet with the Contracting Officer to discuss and develop a mutual understanding relative to the administration of the value engineering and safety program, preparation of the schedule prices, shop drawings, and other submittals, scheduling programming, prosecution of the work, and clear expectations of the "Interim DD Form 1354" Submittal. Major subcontractors who will engage in the work shall also attend.

1.6 FACILITY TURNOVER PLANNING MEETINGS (NAVFAC Red Zone - NRZ)

Key personnel will meet to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start the turnover process at the Pre Construction Conference meeting and convene at the Facility Turnover Meetings once the project has reached approximately 75 percent completion. The Contracting Officer's Representative will lead the meetings and guide discussions based on an agenda provided by the Government. The facility Turnover effort shall include the following:

a. Pre Construction Meeting - Contracting Officer's Technical Representative (COTR) will provide the NRZ Checklist and the Contractor, Client, and NAVFAC Representatives will compare Contractor's schedule to NRZ Checklist items.

b. Facility Turnover Meetings

    1. Fill in the NRZ Checklist including Contractor, Client, and NAVFAC Checklist Items and assign a person responsible for each item and a due date. The Contractor's Representative will facilitate the

assignment of responsibilities, fill out the NRZ Checklist, and discuss "Interim DD From 1354" requirements.

2. Review the Contractor's updated schedule. The Contractor shall develop a POAM for the completion of all Contractor, Client, and NAVFAC Checklist items.

3. Confirm that all NRZ Checklist items will be completed on time for the scheduled Facility Turnover.

1.7 AVAILABILITY OF CADD AND HYPACK DRAWING FILES

After award and upon request, the electronic "Computer-Aided Drafting and Design (CADD)" and/or HYPACK data files will only be made available to the Contractor for use in preparation of construction drawings and data related to the referenced contract subject to the following terms and conditions. Request specific drawing numbers of files required; the entire set of drawing files will not be provided.

Data contained on these electronic files shall not be used for any purpose other than as a convenience in the preparation of construction drawings and data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor shall make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor shall, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic CADD drawing files are not construction documents. Differences may exist between the CADD files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic CADD and HYPACK files, nor does it make representation to the compatibility of these files with the Contractors hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished CADD files, the signed and sealed construction documents shall govern. The Contractor is responsible for determining if any conflict exists. Use of these CADD files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project.

If the Contractor uses, duplicates and/or modifies these electronic CADD files for use in producing construction drawings and data related to this contract, all previous indicia of ownership (seals, logos, signatures, initials and dates) shall be removed.

1.8 ELECTRONIC MAIL (E-MAIL) ADDRESS

The Contractor shall establish and maintain electronic mail (e-mail) capability along with the capability to open various electronic attachments in Microsoft, Adobe Acrobat, and other similar formats. Within 10 days after contract award, the Contractor shall provide the Contracting Officer a single (only one) e-mail address for electronic communications from the Contracting Officer related to this contract including, but not limited to

contract documents, invoice information, request for proposals, and other correspondence. The Contracting Officer may also use email to notify the Contractor of base access conditions when emergency conditions warrant, such as hurricanes, terrorist threats, etc. Multiple email address will not allowed.

It is the Contractor's responsibility to make timely distribution of all Contracting Officer initiated e-mail with its own organization including field office(s). The Contractor shall promptly notify the Contracting Officer, in writing, of any changes to this email address.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 32 01.00 10

PROJECT SCHEDULE

08/08

the preparation and maintenance of the project schedule for construction projects or design-build construction projects

PART 1 GENERAL

1.1 SUBMITTALS
1.2 QUALITY ASSURANCE

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS
3.1.1 Approved Project Schedule
3.1.2 Schedule Status Reports
3.1.3 Default Terms
3.2 BASIS FOR PAYMENT AND COST LOADING
3.3 PROJECT SCHEDULE DETAILED REQUIREMENTS
3.3.1 Critical Path Method
3.3.2 Level of Detail Required
3.3.2.1 Activity Durations
3.3.2.2 Procurement Activities
3.3.2.3 Mandatory Tasks
3.3.2.4 Government Activities
3.3.3 Scheduled Project Completion and Activity Calendars
3.3.3.1 Project Start Date
3.3.3.2 Schedule Constraints and Open Ended Logic
3.3.3.3 Early Project Completion
3.3.4 Interim Completion Dates
3.3.4.1 Start Phase
3.3.4.2 End Phase
3.3.5 Default Progress Data Disallowed
3.3.6 Calculation Mode
3.3.7 Milestones
3.4 PROJECT SCHEDULE SUBMISSIONS
3.4.1 Preliminary Project Schedule Submission
3.5 SUBMISSION REQUIREMENTS
3.5.1 Data CD's
3.5.2 Narrative Report

-- End of Section Table of Contents --

SECTION 01 32 01.00 10

PROJECT SCHEDULE
08/08

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Project Schedule; G

1.2 QUALITY ASSURANCE

Designate an authorized representative to be responsible for the preparation of the schedule and all required updating (activity status) and preparation of reports. The authorized representative shall be experienced in scheduling projects similar in nature and complexity to this project and shall be experienced in the use of the scheduling software that meets the requirements of this specification.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Prepare for approval a Project Schedule, as specified herein, pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS. Show in the schedule the sequence in which the Contractor proposes to perform the work and dates on which the Contractor contemplates starting and completing all schedule activities. The scheduling of the entire project, including the design and dredging sequences, is required. The scheduling of dredging is the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. working on the project shall also contribute in developing and maintaining an accurate Project Schedule. Provide a schedule that is a forward planning as well as a project monitoring tool.

3.1.1 Approved Project Schedule

Use the approved Project Schedule to measure the progress of the work and to aid in evaluating time extensions. Make the schedule cost loaded and activity coded. The schedule will provide the basis for all progress payments. If the Contractor fails to submit any schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

3.1.2 Schedule Status Reports

Provide a Schedule Status Report on at least a monthly basis. If, in the

opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of dredging plant, and to submit for approval any supplementary schedule or schedules as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

3.1.3 Default Terms

Failure of the Contractor to comply with the requirements of the Contracting Officer shall be grounds for a determination, by the Contracting Officer, that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of the contract.

3.2 BASIS FOR PAYMENT AND COST LOADING

Use the schedule as the basis for determining contract earnings during each update period and therefore the amount of each progress payment. Lack of an approved schedule update, or qualified scheduling personnel, will result in the inability of the Contracting Officer to evaluate contract earned value for the purposes of payment. In the event schedule revisions are directed by the Contracting Officer and those revisions have not been included in subsequent revisions or updates, the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until such revisions to the Project Schedule have been made. Activity cost loading shall be reasonable, as determined by the Contracting Officer.

3.3 PROJECT SCHEDULE DETAILED REQUIREMENTS

The computer software system utilized to produce and update the Project Schedule shall be capable of meeting all requirements of this specification. Failure of the Contractor to meet the requirements of this specification will result in the disapproval of the schedule.

3.3.1 Critical Path Method

Use the Critical Path Method (CPM) of network calculation to generate the Project Schedule. Prepare the Project Schedule using the Precedence Diagram Method (PDM).

3.3.2 Level of Detail Required

Develop the Project Schedule to an appropriate level of detail. Failure to develop the Project Schedule to an appropriate level of detail, as determined by the Contracting Officer, will result in its disapproval. The Contracting Officer will consider, but is not limited to, the following characteristics and requirements to determine appropriate level of detail:

3.3.2.1 Activity Durations

Reasonable activity durations are those that allow the progress of ongoing activities to be accurately determined between update periods. Less than 2 percent of all non-procurement activities shall have Original Durations

(OD) greater than 20 work days or 30 calendar days. Procurement activities are defined herein.

3.3.2.2 Procurement Activities

The schedule must include activities associated with the submittal, approval, procurement, fabrication and delivery of long lead materials, equipment, fabricated assemblies and supplies. Long lead procurement activities are those with an anticipated procurement sequence of over 90 calendar days. A typical procurement sequence includes the string of activities: submit, approve, procure, fabricate, and deliver.

3.3.2.3 Mandatory Tasks

The following tasks must be included and properly scheduled:

a. Bucket dredging of Little Creek Amphibious Base in the indicated areas.

b. Transportation to Port Weanack Dredge for special handling, off-loading of material from barge to trucks and transport to the Charles City Landfill in Charles City County, VA.

c. Pre and Post dredge hydrographic survey by Government.

3.3.2.4 Government Activities

Show Government and other agency activities that could impact progress. These activities include, but are not limited to: barge and plant layout approvals, real estate permits, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

3.3.3 Scheduled Project Completion and Activity Calendars

The schedule interval shall extend from NTP date to the required contract completion date. The contract completion activity (End Project) shall finish based on the required contract duration in the accepted contract proposal, as adjusted for any approved contract time extensions. The first scheduled work period shall be the day after NTP is acknowledged by the Contractor. Schedule activities on a calendar to which the activity logically belongs. Activities may be assigned to a 7 day calendar when the contract assigns calendar day durations for the activity such as a Government Acceptance activity. If the Contractor intends to perform physical work less than seven days per week, schedule the associated activities on a calendar with non-work periods identified including weekends and holidays. Assign the Category of Work Code - Weather Sensitive Installation to those activities that are weather sensitive. Original durations must account for anticipated normal adverse weather. The Government will interpret all work periods not identified as non-work periods on each calendar as meaning the Contractor intends to perform work during those periods.

3.3.3.1 Project Start Date

The schedule shall start no earlier than the date on which the NTP was acknowledged. Include as the first activity in the project schedule an activity called "Start Project"(or NTP). The "Start Project" activity shall have an "ES" constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.3.2 Schedule Constraints and Open Ended Logic

Constrain completion of the last activity in the schedule by the contract completion date. Schedule calculations shall result in a negative float when the calculated early finish date of the last activity is later than the contract completion date. Include as the last activity in the project schedule an activity called "End Project". The "End Project" activity shall have an "LF" constraint date equal to the contract completion date for the project, and with a zero day duration or by using the "project must finish by" date in the scheduling software. The schedule shall have no constrained dates other than those specified in the contract. The use of artificial float constraints such as "zero fee float" or "zero total float" are typically prohibited. There shall only be 2 open ended activities: Start Project (or NTP) with no predecessor logic and End Project with no successor logic.

3.3.3.3 Early Project Completion

In the event the Preliminary or Initial project schedule calculates an early completion date of the last activity prior to the contract completion date, the Contractor shall identify those activities that it intends to accelerate and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. The last activity shall have a late finish constraint equal to the contract completion date and the schedule will calculate positive float. The Government will not approve an early completion schedule with zero float on the longest path. The Government is under no obligation to accelerate activities for which it is responsible to support a proposed early contract completion.

3.3.4 Interim Completion Dates

Constrain contractually specified interim completion dates to show negative float when the calculated early finish date of the last activity in that phase is later than the specified interim completion date.

3.3.4.1 Start Phase

Include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have an "ES" constraint date equal to the date on which the NTP was acknowledged, and a zero day duration.

3.3.4.2 End Phase

Include as the last activity for a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have an "LF" constraint date equal to the specified completion date for that phase and a zero day duration.

3.3.5 Default Progress Data Disallowed

Do not automatically update Actual Start and Finish dates with default mechanisms that may be included in the scheduling software. Activity Actual Start (AS) and Actual Finish (AF) dates assigned during the updating process shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the AS and AF dates on the Daily Quality Control report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control

reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's updated schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. Updating of the percent complete and the remaining duration of any activity shall be independent functions. Disable program features which calculate one of these parameters from the other.

3.3.6 Calculation Mode

Schedule calculations shall retain the logic between predecessors and successors even when the successor activity starts and the predecessor activity has not finished. Software features that in effect sever the tie between predecessor and successor activities when the successor has started and the predecessor logic is not satisfied ("progress override") will not be allowed.

3.3.7 Milestones

The schedule must include milestone activities for each significant project event.

3.4 PROJECT SCHEDULE SUBMISSIONS

Provide the submissions as described below. The data CD, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

3.4.1 Preliminary Project Schedule Submission

Submit the Preliminary Project Schedule, defining the Contractor's planned operations for the first 90 calendar days for approval within 15 calendar days after the NTP is acknowledged. The approved Preliminary Project Schedule will be used for payment purposes not to exceed 90 calendar days after NTP. It may be summary in nature for the remaining performance period. It must be early start and late finish constrained and logically tied as previously specified. The Preliminary Project Schedule forms the basis for the Initial Project Schedule specified herein and must include all of the required Plan and Program preparations, submissions and approvals identified in the contract (for example, Quality Control Plan, Safety Plan, and Environmental Protection Plan) as well as other non-dredging activities intended to occur within the first 90 calendar days. Schedule any dredging activities planned for the first 90 calendar days after NTP. Constrain planned dredging activities by Government acceptance of the associated submittal and all other specified Program and Plan approvals.

3.5 SUBMISSION REQUIREMENTS

Submit the following items for the Preliminary Schedule, Initial Schedule, and every Periodic Schedule Update throughout the life of the project:

3.5.1 Data CD's

Provide two sets of data CD's containing the project schedule in the backup format. Each CD shall also contain all previous update backup files. File medium shall be CD. Label each CD indicating the type of schedule (Preliminary, Initial, Update), full contract number, Data Date and file name. Each schedule shall have a unique file name as determined by the Contractor.

3.5.2 Narrative Report

Provide a Narrative Report with the project schedule as the basis of the progress payment request. The Narrative Report shall include: a description of activities along the 2 most critical paths where the total float is less than or equal to 20 work days, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to communicate to the Government, the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis. Identify and explain why any activities that, based their calculated late dates, should have either started or finished during the update period but did not.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 33 00

SUBMITTAL PROCEDURES

01/08

PART 1 GENERAL

1.1 DEFINITIONS
1.1.1 Submittal Descriptions (SD)
1.1.2 Approving Authority
1.1.3 Work
1.2 SUBMITTALS
1.3 SUBMITTAL CLASSIFICATION
1.4 FORWARDING SUBMITTALS REQUIRING GOVERNMENT APPROVAL
1.4.1 Submittals Required from the Contractor
1.5 PREPARATION
1.5.1 Transmittal Form
1.5.2 Identifying Submittals
1.5.3 Format of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals
1.6 QUANTITY OF SUBMITTALS
1.6.1 Number of Copies of Submittals
1.7 VARIATIONS / SUBSTITUTION REQUESTS
1.7.1 Considering Variations
1.7.2 Proposing Variations
1.7.3 Warranting That Variations Are Compatible
1.7.4 Review Schedule Is Modified
1.8 SUBMITTAL REGISTER
1.8.1 Use of Submittal Register
1.8.2 Contractor Use of Submittal Register
1.8.3 Approving Authority Use of Submittal Register
1.8.4 Contractor Action Code and Action Code
1.8.5 Copies Delivered to the Government
1.9 SCHEDULING
1.9.1 Reviewing, Certifying, Approving Authority
1.9.2 Constraints
1.9.3 QC Organization Responsibilities
1.10 GOVERNMENT APPROVING AUTHORITY
1.10.1 Review Notations
1.11 DISAPPROVED OR REJECTED SUBMITTALS
1.12 APPROVED/ACCEPTED SUBMITTALS
1.13 APPROVED SAMPLES

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 33 00

SUBMITTAL PROCEDURES
01/08

PART 1 GENERAL

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Contractor's Quality Control (CQC) System Manager and the Designer of Record, if applicable, to check and approve all items prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

Submittals requiring Government approval are to be scheduled and made prior to the acquisition of the material or equipment covered thereby.

1.1 DEFINITIONS

1.1.1 Submittal Descriptions (SD)

Submittals requirements are specified in the technical sections. Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

Submittals which are required prior to a commencing work on site.

Certificates of insurance
Surety bonds
Dredging progress schedule
Submittal register
Schedule of prices
Health and safety plan
Work plan/Barge Dredge Plant Placement
Quality control(QC) plan
Environmental protection plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily logs and checklists.

Final acceptance test and operational test procedure.

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Text of posted operating instructions.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Special requirements necessary to properly close out a dredging contract are to find volumes of dredging.

1.1.2 Approving Authority

Office or designated person authorized to approve submittal.

1.1.3 Work

As used in this section, on- and off-site dredging required by contract documents, including labor necessary to produce submittals, dredging, materials, products, equipment, and systems incorporated or to be incorporated in such dredging.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal register; G

1.3 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.4 FORWARDING SUBMITTALS REQUIRING GOVERNMENT APPROVAL

1.4.1 Submittals Required from the Contractor

As soon as practicable after award of contract, and before procurement of fabrication, forward to the PWD Little Creek Facilities Engineering and Acquisition Division, 1450 Gator Boulevard, Suite 150, Building 3165, Norfolk, Virginia, 23521.

1.5 PREPARATION

1.5.1 Transmittal Form

1.5.2 Identifying Submittals

When submittals are provided by a lower tier contractor the Prime Contractor is to prepare, review and stamp with Contractor's approval all specified submittals prior to submitting for Government approval.

Identify submittals, except sample installations and sample panels, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

a. Project title and location.

b. Construction contract number.

c. Date of the drawings and revisions.

d. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other second tier Contractor associated with submittal.

e. Section number of the specification section by which submittal is required.

f. Submittal description (SD) number of each component of submittal.

g. When a resubmission, add alphabetic suffix on submittal description, for example, submittal 18 would become 18A, to indicate resubmission.

h. Product identification and location in project.

1.5.3 Format of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

a. When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply Contractor's approval stamp to document, but to a separate sheet accompanying document.

b. Provide all dimensions in administrative submittals in metric. Where data are included in preprinted material with English units only, submit metric dimensions on separate sheet.

1.6 QUANTITY OF SUBMITTALS

1.6.1 Number of Copies of Submittals

Unless otherwise specified, submit four sets of all submittals.

1.7 VARIATIONS / SUBSTITUTION REQUESTS

Variations from contract requirements require Government approval pursuant to contract Clause FAR 52.236-21 and will be considered where advantageous to Government.

1.7.1 Considering Variations

Discussion with Contracting Officer prior to submission, will help ensure functional and quality requirements are met and minimize rejections and re-submittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from contract requirements in transmittal letters. Failure to point out deviations may result in the Government requiring rejection and removal of such work at no additional cost to the Government.

1.7.2 Proposing Variations

When proposing variation, deliver written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

1.7.3 Warranting That Variations Are Compatible

When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.7.4 Review Schedule Is Modified

In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the Government of submittals with variations.

1.8 SUBMITTAL REGISTER

Prepare and maintain submittal register, as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. A submittal register showing items of equipment and materials for which submittals are required by the specifications is provided as an attachment. This list may not be all inclusive and additional submittals may be required. The Government will provide the initial submittal register with the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD No. and type, e.g. SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

Column (f): Indicate approving authority for each submittal.

Thereafter, the Contractor is to track all submittals by maintaining a complete list, including completion of all data columns, including dates on which submittals are received and returned by the Government.

1.8.1 Use of Submittal Register

Submit submittal register. Submit with QC plan and project schedule. Verify that all submittals required for project are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.

Column (h) Contractor Approval Date: Date Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.8.2 Contractor Use of Submittal Register

Update the following fields with each submittal throughout contract.

Column (b) Transmittal Number: Contractor assigned list of

consecutive numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) List date of submittal transmission.

Column (q) List date approval received.

1.8.3 Approving Authority Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in program utilized by Contractor.

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (l) List date of submittal receipt.

Column (m) through (p)List Date related to review actions.

Column (q) List date returned to Contractor.

1.8.4 Contractor Action Code and Action Code

Entries for columns (j) and (o), are to be used are as follows (others may be prescribed by Transmittal Form):

NR - Not Received

AN - Approved as noted

A - Approved

RR - Disapproved, Revise, and Resubmit

1.8.5 Copies Delivered to the Government

Deliver one copy of submittal register updated by Contractor to Government with each invoice request.

1.9 SCHEDULING

Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Include certifications to be submitted with the pertinent drawings at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.

b. Submittals called for by the contract documents will be listed on the register. If a submittal is called for but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract

documents but which have been omitted from the register or marked "N/A".

c. Re-submit register and annotate monthly by the Contractor with actual submission and approval dates. When all items on the register have been fully approved, no further re-submittal is required.

d. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.9.1 Reviewing, Certifying, Approving Authority

The QC organization is responsible for reviewing and certifying that submittals are in compliance with contract requirements. Approving authority on submittals is QC Manager unless otherwise specified for specific submittal. At each "Submittal" paragraph in individual specification sections, a notation "G," following a submittal item, indicates Contracting Officer is approving authority for that submittal item.

1.9.2 Constraints

a. Conform to provisions of this section, unless explicitly stated otherwise for submittals listed or specified in this contract.

b. Submit complete submittals for each definable feature of work. Submit at the same time components of definable feature interrelated as a system.

c. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without review.

d. Approval of a separate material, product, or component does not imply approval of assembly in which item functions.

1.9.3 QC Organization Responsibilities

a. Note date on which submittal was received from Contractor on each submittal.

b. Review each submittal; and check and coordinate each submittal with requirements of work and contract documents.

c. Review submittals for conformance with project design concepts and compliance with contract documents.

d. Act on submittals, determining appropriate action based on QC organization's review of submittal.

(1) When QC Manager is approving authority, take appropriate action on submittal from the possible actions defined in paragraph entitled, "Actions Possible."

(2) When Contracting Officer is approving authority or when variation has been proposed, forward submittal to Government with certifying statement or return submittal marked "not reviewed" or

"revise and resubmit" as appropriate. The QC organization's review of submittal determines appropriate action.

e. Ensure that material is clearly legible.

f. Stamp each sheet of each submittal with QC certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.

(1) When approving authority is Contracting Officer, QC organization will certify submittals forwarded to Contracting Officer with the following certifying statement:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract Number [_____], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Government approval.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Certified by QC Manager _____, Date _____"
(Signature)

(2) When approving authority is QC Manager, QC Manager will use the following approval statement when returning submittals to Contractor as "Approved" or "Approved as Noted."

"I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated with contract Number [_____], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is approved for use.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Approved by QC Manager _____, Date _____"
(Signature)

g. Sign certifying statement or approval statement. The QC organization member designated in the approved QC plan is the person signing certifying statements. The use of original ink for signatures is required. Stamped signatures are not acceptable.

h. Update submittal register [database]as submittal actions occur and maintain the submittal register at project site until final acceptance of all work by Contracting Officer.

i. Retain a copy of approved submittals at project site, including Contractor's copy of approved samples.

1.10 GOVERNMENT APPROVING AUTHORITY

When approving authority is Contracting Officer, the Government will:

a. Note date on which submittal was received from QC Manager.

b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.

c. Identify returned submittals with one of the actions defined in paragraph entitled "Review Notations" and with markings appropriate for action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date approved submittals. Two copies of the approved submittal will be retained by the Contracting Officer and two copies of the submittal will be returned to the Contractor.

1.10.1 Review Notations

Contracting Officer review will be completed within 30 calendar days after date of submission. Submittals will be returned to the Contractor with the following notations:

a. Submittals marked "approved" or "accepted" authorize the Contractor to proceed with the work covered.

b. Submittals marked "approved as noted" "or approved except as noted, resubmittal not required," authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections.

c. Submittals marked "not approved" or "disapproved," or "revise and resubmit," indicate noncompliance with the contract requirements or design concept, or that submittal is incomplete. Resubmit with appropriate changes. No work shall proceed for this item until resubmittal is approved.

d. Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required , does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.

1.11 DISAPPROVED OR REJECTED SUBMITTALS

Contractor shall make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications; notice as required under the clause entitled, "Changes" is to be given to the Contracting Officer. Failure to point out deviations may result in the Government requiring rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.12 APPROVED/ACCEPTED SUBMITTALS

The Contracting Officer's approval or acceptance of submittals is not be construed as a complete check, and indicates only that. Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for satisfactory dredging of all work design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory dredging of all work. After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.13 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, the Contractor to assure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for Materials and equipment incorporated in the work. If requested, approved samples, including those which may be damaged in testing, will be returned to the Contractor, at his expense, upon completion of the contract. Samples not approved will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material. Government reserves the right to disapproved any material or equipment which previously has proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Contractor to replace such materials or equipment to meet contract requirements.

Approval of the Contractor's samples by the Contracting Officer does not relieve the Contractor of his responsibilities under the contract.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

CONTRACTOR'S SUBMITTAL TRANSMITTAL

	CONTRACT NO:	DATE:
	TRANSMITTAL/RESUBMITTAL NO.:	PREVIOUS SUBMITTAL NO (if applicable):
FROM CONTRACTOR:	PROJECT TITLE AND LOCATION:	
TO:		

CONTRACTOR USE ONLY	REVIEWER USE ONLY	GOVT USE ONLY
List only one specification division per form *List only one of the following categories on each transmittal form and indicate which is being submitted* ☐ Contractor Approval ☐Govt Approval ☐ Variance Request (Govt Approval)	ACTION CODES A – Approved D – Disapproved AN – Approved As Noted ANR – Approved As Noted Resubmit NR – Not Reviewed	ACTION CODES A – Approved D – Disapproved (Revise and Resubmit) AN – Approved As Noted ANR – Approved As Noted (Resubmit) NR – Not Reviewed

ITEM	SPEC. SECT. & PARA. And/or DWG. NO.	ITEM IDENTIFICATION (Type, size, model no., Mfg. Name, drawing or brochure number)	NO. OF COPIES	RECOMMENDED ACTION	REVIEWER'S INITIALS AND DATE	ACTION	GOVERNMENT REPRESENTATIVE INITIALS, CODE AND DATE

CONTRACTOR'S CERTIFICATION AND COMMENTS: IT IS HEREBY CERTIFIED THAT THE EQUIPMENT AND/OR MATERIAL SHOWN AND MARKED IN THIS SUBMITTAL IS THAT PROPOSED TO BE INCORPORATED INTO THIS CONTRACT, IS IN COMPLIANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS, AND CAN BE INSTALLED IN THE ALLOCATED SPACES.	DATE RECEIVED BY REVIEWER:	DATE RECEIVED BY GOVT:
	REVIEWER'S COMMENTS:	GOVT COMMENTS:
NOTE: APPROVAL BY THE GOVERNMENT OF SUBMITTED ITEMS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH ALL THE REQUIREMENTS OF THE CONTRACT PLANS AND SPECIFICATIONS		
CONTRACTOR'S QC (SIGNATURE): DATE:	REVIEWER'S SIGNATURE: DATE:	GOVT REP SIGNATURE: DATE:

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS

08/08

safety and occupational health requirements for the protection of Contractor and Government personnel, property and resources

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 DEFINITIONS
1.4 CONTRACTOR SAFETY SELF-EVALUATION CHECKLIST
1.5 REGULATORY REQUIREMENTS
1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS
1.6.1 Meetings
1.6.1.1 Preconstruction Conference
1.6.1.2 Safety Meetings
1.7 ACCIDENT PREVENTION PLAN (APP)
1.7.1 EM 385-1-1 Contents
1.8 ACTIVITY HAZARD ANALYSIS (AHA)
1.9 DISPLAY OF SAFETY INFORMATION
1.10 SITE SAFETY REFERENCE MATERIALS
1.11 EMERGENCY MEDICAL TREATMENT
1.12 REPORTS
1.12.1 Accident Reports
1.12.2 Accident Notification
1.12.3 Monthly Exposure Reports
1.12.4 Third Party Certification of Barge-Mounted Mobile Cranes
1.13 HOT WORK
1.14 SEVERE STORM PLAN

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK
3.1.1 Hazardous Material Use
3.1.2 Hazardous Material Exclusions
3.1.3 Unforeseen Hazardous Material
3.2 SAFETY LOCKOUT/TAGOUT PROCEDURES
3.2.1 Tag Placement
3.2.2 Tag Removal
3.3 FALL HAZARD PROTECTION AND PREVENTION PROGRAM
3.3.1 Training
3.3.2 Fall Protection Equipment and Systems
3.3.2.1 Personal Fall Arrest Equipment
3.3.3 Existing Anchorage

3.3.4 Horizontal Lifelines
3.3.5 Guardrails and Safety Nets
3.3.6 Rescue and Evacuation Procedures
3.4 EQUIPMENT
3.4.1 Material Handling Equipment
3.4.2 Weight Handling Equipment
3.4.3 Equipment and Mechanized Equipment
3.5 ELECTRICAL
3.5.1 Portable Extension Cords

-- End of Section Table of Contents --

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS
08/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

ASSE/SAFE A10.32	(2004) Fall Protection
ASSE/SAFE A10.34	(2001; R 2005) Protection of the Public on or Adjacent to Construction Sites
ASSE/SAFE Z359.1	(2007) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

ASME INTERNATIONAL (ASME)

ASME B30.22	(2005) Articulating Boom Cranes
ASME B30.3	(2004) Construction Tower Cranes
ASME B30.5	(2004) Mobile and Locomotive Cranes
ASME B30.8	(2004) Floating Cranes and Floating Derricks

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(2006; Errata 2006) Standard for Portable Fire Extinguishers
NFPA 241	(2004) Safeguarding Construction,Alteration, and Demolition Operations
NFPA 51B	(2003) Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 70	(2007) National Electrical Code - 2008 Edition

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2003) Safety -- Safety and Health Requirements

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1919	Gear Certification
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.500	Fall Protection

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

Government acceptance is required for submittals with a "G" designation.

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G

Activity Hazard Analysis (AHA); G

Proof of qualification for Crane Operators; G

SD-06 Test Reports

Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports

SD-07 Certificates

License Certificates

Contractor Safety Self-Evaluation Checklist; G, A

Third Party Certification of Barge-Mounted Mobile Cranes

Machinery & Mechanized Equipment Certification Form

1.3 DEFINITIONS

a. Competent Person for Fall Protection. A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as their application and use with related equipment, and has the authority to take prompt corrective measures to eliminate the hazards of falling.

b. High Visibility Accident. Any mishap which may generate publicity and/or high visibility.

c. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a

physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

d. Operating Envelope. The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers and crane walkers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).

e. Qualified Person for Fall Protection. A person with a recognized degree or professional certificate, and with extensive knowledge, training and experience in the field of fall protection; who is capable of performing design, analysis, and evaluation of fall protection systems and equipment.

f. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:

(1) Death, regardless of the time between the injury and death, or the length of the illness;

(2) Days away from work (any time lost after day of injury/illness onset);

(3) Restricted work;

(4) Transfer to another job;

(5) Medical treatment beyond first aid;

(6) Loss of consciousness; or

(7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

g. "USACE" property and equipment specified in USACE EM 385-1-1 should be interpreted as Government property and equipment.

h. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and/or collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).

1.4 CONTRACTOR SAFETY SELF-EVALUATION CHECKLIST

Contracting Officer will provide a "Contractor Safety Self-Evaluation checklist" to the Contractor at the pre-construction conference. The checklist will be completed monthly by the Contractor and submitted with each request for payment voucher. An acceptable score of 90 or greater is required. Failure to submit the completed safety self-evaluation checklist

or achieve a score of at least 90, will result in a retention of up to 10 percent of the voucher.

1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, comply with USACE EM 385-1-1, and the following federal, state, and local, laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Meetings

1.6.1.1 Preconstruction Conference

a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.

c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.

d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

1.6.1.2 Safety Meetings

Conduct and document meetings as required by EM 385-1-1. Attach minutes showing contract title, signatures of attendees and a list of topics discussed to the Contractors' daily quality control report.

1.7 ACCIDENT PREVENTION PLAN (APP)

Use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan". Specific requirements for some of the APP elements are described below. The APP shall be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP

shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated CSP and/or CIH.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate/remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSE/SAFE A10.34,) and the environment.

Copies of the accepted plan will be maintained at the Contracting Officer's office and at the job site.

1.7.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the following is required:

a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be used such as CSPs, CIHs, STSs, CHSTs. Specify the duties of each position.

b. Qualifications of competent and of qualified persons. As a minimum, designate and submit qualifications of competent persons for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.

1.8 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

Develop the activity hazard analyses using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the Contracting Officer.

1.9 DISPLAY OF SAFETY INFORMATION

Within 1 calendar day after commencement of work, erect a safety bulletin board at the job site. Include and maintain information on safety bulletin board as required by EM 385-1-1, section 01.A.06.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

1.11 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.12 REPORTS

1.12.1 Accident Reports

a. Conduct an accident investigation for recordable injuries and illnesses, and property damage accidents resulting in at least $2,000 in damages, to establish the root cause(s) of the accident, complete the Navy Contractor Significant Incident Report (CSIR) form and provide the report to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms.

b. Conduct an accident investigation for any weight handling equipment accident (including rigging gear accidents) to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.

1.12.2 Accident Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $2,000, or any weight handling equipment accident. Within notification include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted.

1.12.3 Monthly Exposure Reports

Monthly exposure reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

1.12.4 Third Party Certification of Barge-Mounted Mobile Cranes

Certify barge-mounted mobile cranes in accordance with 29 CFR 1919 by an OSHA accredited person.

1.13 HOT WORK

Submit and obtain a written permit prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, from the Fire Division. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (2) twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit.

When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division phone number. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DIVISION IMMEDIATELY.

1.14 SEVERE STORM PLAN

In the event of a severe storm warning, the Contractor must:

a. Secure outside equipment and materials and place materials that could be damaged in protected areas.

b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.

c. Ensure that temporary erosion controls are adequate.

d. Clear Drydock Area at least 24 hours prior to the storm so that the Drydock may return and anchor up for the duration of the storm.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

Comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, Federal and/or State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

3.1.1 Hazardous Material Use

Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocynates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

3.1.3 Unforeseen Hazardous Material

If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 SAFETY LOCKOUT/TAGOUT PROCEDURES

Contractor shall ensure that each employee is familiar with and complies with these procedures and 29 CFR 1910.147.

Contracting Officer will, at the Contractor's request, apply lockout/tagout tags and take other actions that, because of experience and knowledge, are known to be necessary to make the particular equipment safe to work on.

No person, regardless of position or authority, shall operate any switch, valve, or equipment that has an official lockout/tagout tag attached to it,

nor shall such tag be removed except as provided in this section.

No person shall work on any equipment that requires a lockout/tagout tag unless he, his immediate supervisor, project leader, or a subordinate has in his possession the stubs of the required lockout/tagout tags.

When work is to be performed on electrical circuits, only qualified personnel shall perform work on electrical circuits.

A supervisor who is required to enter an area protected by a lockout/tagout tag will be considered a member of the protected group provided he notifies the holder of the tag stub each time he enters and departs from the protected area.

Identification markings on building light and power distribution circuits shall not be relied on for established safe work conditions.

Before clearance will be given on any equipment other than electrical (generally referred to as mechanical apparatus), the apparatus, valves, or systems shall be secured in a passive condition with the appropriate vents, pins, and locks.

Pressurized or vacuum systems shall be vented to relieve differential pressure completely.

Vent valves shall be tagged open during the course of the work.

Where dangerous gas or fluid systems are involved, or in areas where the environment may be oxygen deficient, system or areas shall be purged, ventilated, or otherwise made safe prior to entry.

3.2.1 Tag Placement

Lockout/tagout tags shall be completed in accordance with the regulations printed on the back thereof and attached to any device which, if operated, could cause an unsafe condition to exist.

If more than one group is to work on any circuit or equipment, the employee in charge of each group shall have a separate set of lockout/tagout tags completed and properly attached.

When it is required that certain equipment be tagged, the Government will review the characteristics of the various systems involved that affect the safety of the operations and the work to be done; take the necessary actions, including voltage and pressure checks, grounding, and venting, to make the system and equipment safe to work on; and apply such lockout/tagout tags to those switches, valves, vents, or other mechanical devices needed to preserve the safety provided. This operation is referred to as "Providing Safety Clearance."

3.2.2 Tag Removal

When any individual or group has completed its part of the work and is clear of the circuits or equipment, the supervisor, project leader, or individual for whom the equipment was tagged shall turn in his signed lockout/tagout tag stub to the Contracting Officer. That group's or individual's lockout/tagout tags on equipment may then be removed on authorization by the Contracting Officer.

3.3 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

3.3.1 Training

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards. Provide training by a competent person for fall protection accordance with USACE EM 385-1-1, section 21.A.16.

3.3.2 Fall Protection Equipment and Systems

Enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1, section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 05.H. and 05.I. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with 29 CFR 1926.500, Subpart M, USACE EM 385-1-1 and ASSE/SAFE A10.32.

3.3.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet ASSE/SAFE Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 6 feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.

3.3.3 Existing Anchorage

Certified (or re-certified) by a qualified person for fall protection existing anchorages, to be used for attachment of personal fall arrest equipment in accordance with ASSE/SAFE Z359.1. Exiting horizontal lifeline anchorages must be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

3.3.4 Horizontal Lifelines

Design, install, certify and use under the supervision of a qualified person horizontal lifelines for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500).

3.3.5 Guardrails and Safety Nets

Design, install and use guardrails and safety nets in accordance with EM 385-1-1 and 29 CFR 1926 Subpart M.

3.3.6 Rescue and Evacuation Procedures

When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

3.4 EQUIPMENT

3.4.1 Material Handling Equipment

a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.

b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.

c. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

d. An Environmental bucket must be used for dredging of all contaminated material in accordance with the dredged material management plan.

3.4.2 Weight Handling Equipment

a. Equip cranes and derricks as specified in EM 385-1-1, section 16.

b. Notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Prior to cranes entering federal activities, a Crane Access Permit must be obtained from the Contracting Officer. A copy of the permitting process will be provided at the Preconstruction Conference. Contractor's operator shall remain with the crane during the spot check.

c. Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the

manufacturer's recommended procedures.

d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.

e. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.

f. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

g. Do not crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane.

h. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.

i. All employees must keep clear of loads about to be lifted and of suspended loads.

j. Use cribbing when performing lifts on outriggers.

k. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

l. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.

m. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.

n. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

o. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

p. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. This maximum wind speed determination shall be included as part of the activity hazard analysis plan for that operation.

3.4.3 Equipment and Mechanized Equipment

a. Proof of qualifications for operator shall be kept on the project site for review.

b. Manufacture specifications or owner's manual for the equipment

shall be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Incorporate such additional safety precautions or requirements into the AHAs.

3.5 ELECTRICAL

3.5.1 Portable Extension Cords

Size portable extension cords in accordance with manufacturer ratings for the tool to be powered and protected from damage. Immediately remove from service all damaged extension cords. Portable extension cords shall meet the requirements of NFPA 70.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 35 29.13

HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES

01/08

safety and health documents and procedures for hazardous waste site cleanup projects

PART 1 GENERAL

1.1 REFERENCES
1.2 DESCRIPTION OF WORK
1.3 SUBMITTALS
1.4 REGULATORY REQUIREMENTS
1.5 ACCIDENT PREVENTION PLAN/SITE SAFETY AND HEALTH PLAN (APP/SSHP)
1.5.1 Acceptance and Modifications
1.5.2 Availability
1.6 SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION
1.6.1 Project/Site Conditions
1.6.2 Ordnance and Explosives (OE)
1.7 TASK SPECIFIC HAZARDS, INITIAL PPE, HAZWOPER MEDICAL SURVEILLANCE AND TRAINING APPLICABILITY
1.8 STAFF ORGANIZATION, QUALIFICATION AND RESPONSIBILITIES
1.8.1 Safety and Health Manager
1.8.1.1 Responsibilities and Duties
1.8.2 Site Safety and Health Officer
1.8.2.1 Qualifications
1.8.2.2 Responsibilities and Duties
1.8.3 Occupational Physician
1.8.4 Persons Certified in First Aid and CPR
1.8.5 Safety and Health Technicians
1.9 TRAINING
1.9.1 General Hazardous Waste Operations Training
1.9.2 Pre-entry Briefing
1.9.3 Periodic Sessions
1.10 PERSONAL PROTECTIVE EQUIPMENT
1.10.1 Site Specific PPE Program
1.10.2 Levels of Protection
1.10.2.1 Initial PPE Components
1.10.3 PPE for Government Personnel
1.11 MEDICAL SURVEILLANCE PROGRAM
1.11.1 Frequency of Examinations
1.11.2 Content of Physical Examinations/Consultation
1.11.3 Physician's Written Opinion
1.11.4 Employee Certificates
1.11.5 Site Specific Medical Surveillance
1.12 HEAT STRESS MONITORING AND MANAGEMENT
1.13 MATERIALS TRANSFER SAFETY
1.14 HOT WORK
1.15 SITE CONTROL MEASURES

1.15.1 Work Zones
1.15.2 Site Control Log
1.15.3 Communication
1.16 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS
1.17 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES
1.18 CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGEMENT
1.19 INSPECTIONS
1.20 SAFETY AND HEALTH PHASE-OUT REPORT

PART 2 PRODUCTS

PART 3 EXECUTION

ATTACHMENTS:

Task Hazard and Control Sheets

-- End of Section Table of Contents --

SECTION 01 35 29.13

HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES
01/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN PETROLEUM INSTITUTE (API)

API RP 2219	(2005) Safe Operation of Vacuum Trucks in Petroleum Service

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z358.1	(2009) American National Standard for Emergency Eyewash and Shower Equipment

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 85-115	(1985) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2008; Errata 1-2010; Changes 1-3 2010; Changes 4-6 2011) Safety and Health Requirements Manual
ER 385-1-95	(2007; Errata 2007) Safety -- Safety and Health Requirements for Munitions and Explosives of Concern (MEC) Operations

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1904	Recording and Reporting Occupational Injuries and Illnesses
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
49 CFR 171	General Information, Regulations, and

	Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

1.2 DESCRIPTION OF WORK

This section requires Contractors to implement practices and procedures for working safely and in compliance with OSHA and USACE regulation while performing cleanup activities on uncontrolled hazardous waste sites.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for [Contractor Quality Control approval.][information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Exposure Monitoring/Air Sampling Program
Site Control Log
Employee Certificates

1.4 REGULATORY REQUIREMENTS

Comply with EM 385-1-1, OSHA requirements in 29 CFR 1910 and 29 CFR 1926 with work performed under this contract, especially OSHA's Standards 29 CFR 1926.65 and 29 CFR 1910.120 and state specific OSHA requirements where applicable. Submit to the Contracting Officer for resolution matters of interpretation of standards before starting work. The most stringent requirements apply where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary.

1.5 ACCIDENT PREVENTION PLAN/SITE SAFETY AND HEALTH PLAN (APP/SSHP)

Develop and implement a Site Safety and Health Plan and attach to the Accident Prevention Plan (APP) as an appendix (APP/SSHP). Address all occupational safety and health hazards (traditional construction as well as contaminant-related hazards) associated with cleanup operations within the APP/SSHP. Cover each SSHP element in section 28.A.01 of EM 385-1-1 and each APP element in Appendix A of EM 385-1-1. There are overlapping elements in Section 28.A.01 and Appendix A of EM 385-1-1. SSHP appendix elements that overlap with APP elements need not be duplicated in the APP/SSHP provided each SOH issue receives adequate attention and is documented in the APP/SSHP. The APP/SSHP is a dynamic document, subject to change as project operations/execution change. The APP/SSHP will require modification to address changing and previously unidentified health and safety conditions. It is the Contractor's responsibility to ensure that the APP/SSHP is updated accordingly. Submit amendments to the APP/SSHP to the COR as the APP/SSHP is updated. For long duration projects resubmit the APP/SSHP to the COR annually for review. The APP/SSHP must contain all updates.

1.5.1 Acceptance and Modifications

Prior to submittal, the APP/SSHP must be signed and dated by the Safety and Health Manager and the Site Superintendent. Submit for review 10 days prior to the Preconstruction Safety Conference. Deficiencies in the APP/SSHP will be discussed at the preconstruction safety conference, and be revised to correct the deficiencies and resubmitted for acceptance. Onsite work must not begin until the plan has been accepted. Maintain a copy of the written APP/SSHP onsite. Changes and modifications to must be made with the knowledge and concurrence of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer. Bring to the attention of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer any unforeseen hazard that becomes evident during the performance of the work, through the Site Safety and Health Officer (SSHO) for resolution as soon as possible. In the interim, take necessary action to re-establish and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Disregard for the provisions of this specification or the accepted APP/SSHP will be cause for stopping work until the matter has been rectified.

1.5.2 Availability

Make available the APP/SSHP in accordance with 29 CFR 1910.120, (b)(1)(v) and 29 CFR 1926.65, (b)(1)(v).

1.6 SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION

1.6.1 Project/Site Conditions

For information regarding Site Description and Contamination Characterization, refer to Appendix D: Excerpt from the Site Management Plan Fiscal Years 2009 through 2013, Naval Amphibious Base Little Creek, Contract Task Order 0158, prepared by CH2MHill in September 2008 for NAVFAC MIDLANT.

1.6.2 Ordnance and Explosives (OE)

Stop work and contact the Contracting Officer (CO) if ordnance and explosives (OE), explosive media or chemical agent contaminated media (CACM) are discovered during hazardous waste site cleanup activities. Proceed with work after the CO gives permission and, according to ER 385-1-95 requirements.

1.7 TASK SPECIFIC HAZARDS, INITIAL PPE, HAZWOPER MEDICAL SURVEILLANCE AND TRAINING APPLICABILITY

Task specific occupational hazards, task specific HAZWOPER medical surveillance and training applicability and task specific initial PPE requirements for the project are listed on the Task Hazard and Control Sheets at the end of this section. It is the Contractor's responsibility to reevaluate occupational safety and health hazards as the work progresses and to adjust the PPE and onsite operations, if necessary, so that the work is performed safely and in compliance with occupational safety and health regulations.

1.8 STAFF ORGANIZATION, QUALIFICATION AND RESPONSIBILITIES

1.8.1 Safety and Health Manager

Safety and Health manager must have working knowledge of state and federal occupational safety and health regulations..

1.8.1.1 Responsibilities and Duties

The Safety and Health Manager shall:

a. Be responsible for the development, implementation, oversight, and enforcement of the APP/SSHP.

b. Sign and date the APP/SSHP prior to submittal.

c. Conduct initial site-specific training.

d. Be available for consultation for the duration of the remedial activities and at the startup of each new phase of work.

e. Visit the site as needed for the duration of activities, to audit the effectiveness of the APP/SSHP.

f. Be available for emergencies.

g. Provide onsite consultation as needed to ensure the APP/SSHP is fully implemented.

h. Coordinate any modifications to the APP/SSHP with the Site Superintendent, the SSHO, and the Contracting Officer.

i. Provide continued support for upgrading/downgrading of the level of personal protection.

j. Be responsible for evaluating air monitoring data and recommending changes to engineering controls, work practices, and PPE.

k. Review accident reports and results of daily inspections.

l. Serve as a member of the Contractor's quality control staff.

1.8.2 Site Safety and Health Officer

Designate an individual and one alternate as the Site Safety and Health Officer (SSHO). Include the name, qualifications and work experience of the Site Safety and Health Officer and alternate in the APP/SSHP.

1.8.2.1 Qualifications

The SSHO shall meet the following qualifications:

a. A minimum of 2 years experience in implementing safety and health programs at hazardous waste sites and/or hazardous waste disposal industry where personal protective equipment was required.

b. Documented experience in construction techniques and construction safety procedures.

c. Working knowledge of Federal and state occupational safety and health regulations.

d. Specific training in personal and respiratory protective equipment, confined space entry and in the proper use of air monitoring instruments and air sampling methods including monitoring for ionizing radiation.

1.8.2.2 Responsibilities and Duties

The Site Safety and Health Officer shall:

a. Assist and represent the Safety and Health Manager in onsite training and the day to day onsite implementation and enforcement of the accepted APP/SSHP.

b. Be assigned to the site on a full time basis for the duration of field activities. The SSHO can have collateral duties in addition to Safety and Health related duties. If operations are performed during more than 1 work shift per day, a site Safety and Health Officer must be present for each shift and when applicable, act as the radiation safety officer (RSO) as defined in paragraph 06.E.02 of EM 385-1-1 on radioactive waste cleanup projects.

c. Have authority to ensure site compliance with specified safety and health requirements, Federal, state and OSHA regulations and all aspects of the APP/SSHP including, but not limited to, activity hazard analyses, air monitoring, monitoring for ionizing radiation, use of PPE, decontamination, site control, standard operating procedures used to minimize hazards, safe use of engineering controls, the emergency response plan, confined space entry procedures, spill containment program, and preparation of records by performing a daily safety and health inspection and documenting results on the Daily Safety Inspection Log in accordance with 29 CFR 1904.

d. Have authority to stop work if unacceptable health or safety conditions exist, and take necessary action to re-establish and maintain safe working conditions.

e. Consult with and coordinate any modifications to the APP/SSHP with the Safety and Health Manager, the Site Superintendent, and the Contracting Officer.

f. Serve as a member of the Contractor's quality control staff on matters relating to safety and health.

g. Conduct accident investigations and prepare accident reports.

h. Conduct daily safety inspection and document safety and health findings into the Daily Safety Inspection Log. Track noted safety and health deficiencies to ensure that they are corrected.

i. In coordination with site management and the Safety and Health Manager, recommend corrective actions for identified deficiencies and oversee the corrective actions.

1.8.3 Occupational Physician

Utilize the services of a licensed physician, who is certified in

occupational medicine by the American Board of Preventative Medicine, or who, by necessary training and experience is Board eligible. The physician must be familiar with this site's hazards and the scope of this project. Include the medical consultant's name, qualifications, and knowledge of the site's conditions and proposed activities in the APP/SSHP. The physician will be responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1910.120, (f) and 29 CFR 1926.65, (f) and paragraph MEDICAL SURVEILLANCE.

1.8.4 Persons Certified in First Aid and CPR

At least two persons who are currently certified in first aid and CPR by the American Red Cross or other approved agency must be onsite at all times during site operations. They must be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030. These persons may perform other duties but will be immediately available to render first aid when needed.

1.8.5 Safety and Health Technicians

For each work crew in the exclusion zone, one person, designated as a Safety and Health technician, must perform activities such as air monitoring, decontamination, and safety oversight on behalf of the SSHO. They must have appropriate training equivalent to the SSHO in each specific area for which they have responsibility and report to and be under the supervision of the SSHO.

1.9 TRAINING

Meet the following requirements in the Contractor's training program for workers performing cleanup operations and who will be exposed to contaminants.

1.9.1 General Hazardous Waste Operations Training

All Personnel performing duties with potential for exposure to onsite contaminants must meet and maintain the following 29 CFR 1910.120/ 29 CFR 1926.65 (e) training requirements:

a. 24 hours of off site hazardous waste instruction.

b. 1 day actual field experience under the direct supervision of a trained, experienced supervisor.

c. 8 hours refresher training annually.

Onsite supervisors must have an additional 8 hours management and supervisor training specified in 29 CFR 1910.120/29 CFR 1926.65 (e) (4).

1.9.2 Pre-entry Briefing

Prior to commencement of onsite field activities, all site employees, including those assigned only to the Support Zone, must attend a site-specific safety and health training session. This session will be conducted by the Safety and Health Manager and the Site Safety and Health Officer to ensure that all personnel are familiar with requirements and responsibilities for maintaining a safe and healthful work environment. Thoroughly discuss procedures and contents of the accepted APP/SSHP and

Sections 01.B.02 and 28.D.03 of EM 385-1-1 . Each employee must sign a training log to acknowledge attendance and understanding of the training. Notify the Contracting Officer at least [5] five days prior to the initial site-specific training session so government personnel involved in the project may attend.

1.9.3 Periodic Sessions

Conduct periodic onsite training by the SSHO at least weekly for personnel assigned to work at the site during the following [week] [day]. Address safety and health procedures, work practices, any changes in the APP/SSHP, activity hazard analyses, work tasks, or schedule; results of previous week's air monitoring, review of safety discrepancies and accidents. Convene a meeting prior to implementation of the change must be convened should an operational change affecting onsite field work be made, to explain safety and health procedures. Conduct a site-specific training sessions for new personnel, visitors, and suppliers by the SSHO using the training curriculum outlines developed by the Safety and Health Manager. Each employee must sign a training log to acknowledge attendance and understanding of the training.

1.10 PERSONAL PROTECTIVE EQUIPMENT

1.10.1 Site Specific PPE Program

Provide onsite personnel exposed to contaminants with appropriate personal protective equipment. Components of levels of protection (B, C, D and modifications) must be relevant to site-specific conditions, including heat and cold stress potential and safety hazards. Use only respirators approved by NIOSH. Commercially available PPE, used to protect against chemical agent, must be approved by [the director of Army Safety through the Chemical Agent Safety and Health Policy Action Committee (CASHPAC)][ ]. Keep protective equipment and clothing clean and well maintained. Include site-specific procedures to determine PPE program effectiveness and for onsite fit-testing of respirators, cleaning, maintenance, inspection, and storage of PPE within the PPE section of the APP/SSHP.

1.10.2 Levels of Protection

The Safety and Health Manager must establish and evaluate as the work progresses the levels of protection for each work activity. Also establish action levels for upgrade or downgrade in levels of PPE. Describe in the SSHP the protocols and the communication network for changing the level of protection. Address air monitoring results, potential for exposure, changes in site conditions, work phases, job tasks, weather, temperature extremes, individual medical considerations, etc. within the PPE evaluation protocol.

1.10.2.1 Initial PPE Components

The following items constitute initial minimum protective clothing and equipment ensembles.

a. Level D.

1.10.3 PPE for Government Personnel

Three (3) clean sets of personal protective equipment must be available for use by the Contracting Officer or official visitors. The items must be

cleaned and maintained by the Contractor and stored in the clean room and clearly marked: "FOR USE BY GOVERNMENT ONLY." Provide basic training in the use and limitations of the PPE provided.

1.11 MEDICAL SURVEILLANCE PROGRAM

Meet 29 CFR 1910.120/29 CFR 1926.65 (f) and the following requirements for medical surveillance program for workers performing cleanup operations and who will be exposed to contaminants. Assure the Occupational Physician or the physician's designee performs the physical examinations and reviews examination results. Participation in the medical surveillance program will be without cost to the employee, without loss of pay and at a reasonable time and place.

1.11.1 Frequency of Examinations

Medical surveillance program participants must receive medical examinations and consultations on the following schedule:

a. Every 12 months

b. If and when the participant develops signs and symptoms indicating a possible overexposure due to an uncontrolled release of a hazardous substance on the project.

c. Upon termination or reassignment to a job where medical surveillance program participation is not required, unless his/her previous annual examination/consultation was less than 6 months prior to reassignment or termination.

d. On a schedule specified by the occupational physician.

1.11.2 Content of Physical Examinations/Consultation

Verify the following information about medical surveillance program participants:

a. Baseline health conditions and exposure history.

b. Allergies/sensitivity/susceptibility to hazardous substances exposure.

c. Ability to wear personal protective equipment inclusive of NIOSH certified respirators under extreme temperature conditions.

d. Fitness to perform assigned duties.

Provide the occupational physician with the following information for each medical surveillance program participant:

a. Information on the employee's anticipated or measured exposure.

b. A description of any PPE used or to be used.

c. A description of the employee's duties as they relate to the employee's exposures (including physical demands on the employee and heat/cold stress).

d. A copy of 29 CFR 1910.120, or 29 CFR 1926.65.

e. Information from previous examinations not readily available to the examining physician.

f. A copy of Section 5.0 of NIOSH 85-115.

g. Information required by 29 CFR 1910 Section .134.

1.11.3 Physician's Written Opinion

Obtain and furnish to the Safety and Health Manager; and the employee before work begins, a copy of the physician's written opinion for each employee. Address the employee's ability to perform hazardous waste site remediation work and containing the following:

a. The physician's verification of the employee's fitness to perform duties as well as recommended limitations upon the employee's assigned work and/or PPE usage.

b. The physician's opinion about increased risk to the employee's health resulting from work; and

c. A statement that the employee has been informed and advised about the results of the examination.

1.11.4 Employee Certificates

Provided on employee certificates for each worker performing cleanup operations with potential for contaminant-related occupational exposure signed by the safety and health manager and the occupational physician indicating the workers meet the training and medical surveillance requirements of this contract.

1.11.5 Site Specific Medical Surveillance

Prior to onsite work, medical surveillance program participants must undergo the following medical testing: [_____]. Provide an explanation of the site specific medical surveillance testing in the APP/SSHP.

1.12 HEAT STRESS MONITORING AND MANAGEMENT

Document in the APP/SSHP and implement the procedures and practices in section 06.J. in EM 385-1-1 to monitor and manage heat stress.

1.13 MATERIALS TRANSFER SAFETY

Remove liquids and residues from the tanks using explosion-proof or air-driven pumps. Bond to the tank and ground pump motors and suction hoses to prevent electrostatic ignition hazards. Use of a hand pump will be permitted to remove the last of the liquid from the bottom of the tanks. If a vacuum truck is used for removal of liquids or residues, the area of operation for the vacuum truck must be vapor free. locate the truck upwind from the tank and outside the path of probable vapor travel. Discharge the vacuum pump exhaust gases through a hose of adequate size and length downwind of the truck and tank area. Vacuum truck operating and safety practices must conform to API RP 2219. Collect tank residues in drums, tanks, or tank trucks labeled according to 49 CFR 171 and 49 CFR 172 and disposed of as specified. Disconnect and drain fittings and lines of their contents after the materials have been transferred and the tanks have been exposed. Do not spill contents into the environment during cutting or

disconnecting of tank fittings. Transfer materials drained into DOT-approved drums for storage and/or transportation. Only non-sparking or non-heat producing tools shall be used to disconnect and drain or to cut through tank fittings. Electrical equipment (e.g., pumps, portable hand tools, etc.) used for tank preparation must be explosion-proof. Following cutting or disconnecting of the fittings, plug openings leading to the tanks.

1.14 HOT WORK

Hot work will not be permitted on or within the tanks or anywhere else not previously specified as a hot work area, except as outlined herein. Prior to conducting hot work, a hot work permit must be prepared by the person to be conducting the hot work and reviewed and signed off by the Contractor's qualified person. An additional hot work permit may need to be obtained from local authorities or in the case of military or other federal installations, the fire marshal. An example format for a hot work permit must be included in the AAPP/SSHP. Describe compliance with the following procedures. After tank interiors have been decontaminated, hot work may be conducted only when the tank is inerted, and to the extent necessary to begin dismantling the tanks. After decontamination of tank interiors, hot work must not be performed unless monitoring indicates atmospheres within and immediately surrounding the tanks are less than 8% oxygen inside the tank and less than 10% of the LFL outside the tank; continuous monitoring must continue until the hot work is completed. The hot work prohibition includes welding, cutting, grinding, sawing, or other similar operations which could be expected to potentially generate combustion-producing temperatures or sparks, or which could produce potentially hazardous fumes or vapors. Designate an individual at each hot work site as a fire watch. This person's sole responsibility is to monitor the hot work and have immediate access to the fire extinguisher located at each hot work site. A new permit must be obtained at the start of each work shift during which hot work will be conducted.

1.15 SITE CONTROL MEASURES

1.15.1 Work Zones

Initial anticipated work zone boundaries (exclusion zone, contamination reduction zone, support zone, all access points and decontamination areas) are to be clearly delineated on the site drawings. Base delineation of work zone boundaries on the contamination characterization data and the hazard/risk analysis to be performed as described in paragraph: HAZARD/RISK ANALYSIS. As work progresses and field conditions are monitored, work zone boundaries may be modified (and site drawings modified) with approval of the Contracting Officer. Clearly identify work zones and marked in the field (using fences, tape, signs, etc.). Submit and post a site map, showing work zone boundaries and locations of decontamination facilities in the onsite office. Work zones must consist of the following:

a. Exclusion Zone (EZ): The exclusion zone is the area where hazardous contamination is either known or expected to occur and the greatest potential for exposure exists. Control entry into this area and exit may only be made through the CRZ.

b. Contamination Reduction Zone (CRZ): The CRZ is the transition area between the Exclusion Zone and the Support Zone. The personnel and equipment decontamination areas must be separate and unique areas located in the CRZ.

c. Support Zone (SZ): The Support Zone is defined as areas of the site, other than exclusion zones and contamination reduction zones, where workers do not have the potential to be exposed to hazardous substances or dangerous conditions resulting from hazardous waste operations. Secure the Support Zone against active or passive contamination. Site offices, parking areas, and other support facilities must be located in the Support Zone.

1.15.2 Site Control Log

A log of personnel visiting, entering, or working on the site must be maintained. Include the following: date, name, agency or company, time entering and exiting site, time entering and exiting the exclusion zone (if applicable). Before visitors are allowed to enter the Contamination Reduction Zone or Exclusion Zone, they must show proof of current training, medical surveillance and respirator fit testing (if respirators are required for the tasks to be performed) and fill out a Certificate of Worker or Visitor Acknowledgment. Record this visitor information, including date, in the log.

1.15.3 Communication

Provide and install an employee alarm system that has adequate means of on and off site communication in accordance with 29 CFR 1910 Section .165. The means of communication must be able to be perceived above ambient noise or light levels by employees in the affected portions of the workplace. The signals must be distinctive and recognizable as messages to evacuate or to perform critical operations.

1.16 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS

Maintain, as a minimum, the following items onsite and available for immediate use:

a. First aid equipment and supplies approved by the consulting physician.

b. Emergency eyewashes and showers that comply with ANSI/ISEA Z358.1.

c. Provide fire extinguishers of sufficient size and type at site facilities and in all vehicles and at any other site locations where flammable or combustible materials present a fire risk.

1.17 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES

An Emergency Response Plan, that meets the requirements of 29 CFR 1910.120 (l) and 29 CFR 1926.65 (l), must be developed and implemented as a section of the APP/SSHP. In the event of any emergency associated with remedial action, without delay, alert all onsite employees and as necessary offsite emergency responders that there is an emergency situation; take action to remove or otherwise minimize the cause of the emergency; alert the Contracting Officer; and institute measures necessary to prevent repetition of the conditions or actions leading to, or resulting in, the emergency. Train employees that are required to respond to hazardous emergency situations to their level of responsibility according to 29 CFR 1910.120 (q) and 29 CFR 1926.65 (q) requirements. Rehearse the plan regularly as part of the overall training program for site operations. Review the plan periodically and revised as necessary to reflect new or changing site conditions or information. Provide copies of the Emergency Response

Portion of the accepted APP/SSHP to the affected local emergency response agencies. Address, as a minimum, the following elements in the plan:

a. Pre-emergency planning. Coordinate with local emergency response providers during preparation of the Emergency Response Plan. At a minimum, coordinate with local fire, rescue, hazardous materials response teams, police and emergency medical providers to assure all organizations are capable and willing to respond to and provide services for on-site emergencies. Ensure the Emergency Response Plan for the site is compatible and integrated with the local fire, rescue, medical and police security services available from local emergency response planning agencies.

b. Personnel roles, lines of authority, communications for emergencies.

c. Emergency recognition and prevention.

d. Site topography, layout, and prevailing weather conditions.

e. Criteria and procedures for site evacuation (emergency alerting procedures, employee alarm system, emergency PPE and equipment, safe distances, places of refuge, evacuation routes, site security and control).

f. Specific procedures for decontamination and medical treatment of injured personnel.

g. Route maps to nearest prenotified medical facility. Site-support vehicles must be equipped with maps. At the beginning of project operations, drivers of the support vehicles must become familiar with the emergency route and the travel time required.

h. Emergency alerting and response procedures including posted instructions and a list of names and telephone numbers of emergency contacts (physician, nearby medical facility, fire and police departments, ambulance service, Federal, state, and local environmental agencies; as well as Safety and Health Manager, the Site Superintendent, the Contracting Officer and/or their alternates).

i. Criteria for initiating community alert program, contacts, and responsibilities.

j. Procedures for reporting incidents to appropriate government agencies. In the event that an incident such as an explosion or fire, or a spill or release of toxic materials occurs during the course of the project, the appropriate government agencies must be immediately notified. In addition, verbally notify the Contracting Officer and the local district safety office immediately and receive a written notification within 24 hours. Include within the report the following items:

(1) Name, organization, telephone number, and location of the Contractor.

(2) Name and title of the person(s) reporting.

(3) Date and time of the incident.

(4) Location of the incident, i.e., site location, facility name.

(5) Brief summary of the incident giving pertinent details including type of operation ongoing at the time of the incident.

(6) Cause of the incident, if known.

(7) Casualties (fatalities, disabling injuries).

(8) Details of any existing chemical hazard or contamination.

(9) Estimated property damage, if applicable.

(10) Nature of damage, effect on contract schedule.

(11) Action taken to ensure safety and security.

(12) Other damage or injuries sustained, public or private.

k. Procedures for critique of emergency responses and follow-up.

1.18 CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGEMENT

A copy of a Contractor-generated certificate of worker/visitor acknowledgement must be completed and submitted for each visitor allowed to enter contamination reduction or exclusion zones, and for each employee, following the example certificate at the end of this section.

1.19 INSPECTIONS

Attach to and submit with the Daily Quality Control reports the SSHO's Daily Inspection Logs. Include with each entry the following: date, work area checked, employees present in work area, PPE and work equipment being used in each area, special safety and health issues and notes, and signature of preparer.

1.20 SAFETY AND HEALTH PHASE-OUT REPORT

Submit a Safety and Health Phase-Out Report in conjunction with the project close out report and will be received prior to final acceptance of the work. Include the following minimum information :

a. Summary of the overall performance of safety and health (accidents or incidents including near misses, unusual events, lessons learned, etc.).

b. Final decontamination documentation including procedures and techniques used to decontaminate equipment, vehicles, and on site facilities.

c. Summary of exposure monitoring and air sampling accomplished during the project.

d. Signatures of Safety and Health Manager and SSHO.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

Task Hazard and Control Requirements Sheet	
Task	
Initial Anticipated Hazards	
Initial PPE	
Initial Controls	
Initial Exposure Monitoring	
Yes	HAZWOPER Medical Surveillance Required
Yes	HAZWOPER Training Required. 24 hour training (3-day course) is sufficient.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 35 40.00 20

ENVIRONMENTAL MANAGEMENT

07/06

responsibilities and requirements regarding environmental management

PART 1 GENERAL

1.1 REFERENCES
1.2 DEFINITIONS
1.3 PRECONSTRUCTION MEETING
1.4 SUBMITTALS
1.5 CONTRACTOR'S ENVIRONMENTAL MANAGER
1.5.1 Duties
1.5.2 Qualifications
1.6 ENVIRONMENTAL REGULATORY REQUIREMENTS
1.7 ENVIRONMENTAL PROTECTION PLAN
1.8 ENVIRONMENTAL DEMONSTRATION AND TRAINING
1.8.1 Instructor Qualifications
1.8.2 Coordination
1.8.3 Training Program
1.8.3.1 Scheduling
1.8.3.2 Training Modules
1.8.3.3 Evaluation

PART 2 PRODUCTS

2.1 ENVIRONMENTALLY PREFERABLE PRODUCTS
2.1.1 Prohibited Materials
2.1.2 Substitutions

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES
3.1.1 General Disturbance
3.1.2 Water Resources
3.1.3 Fish and Wildlife Resources
3.2 FIELD QUALITY CONTROL

-- End of Section Table of Contents --

SECTION 01 35 40.00 20

ENVIRONMENTAL MANAGEMENT
07/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D 4840	(1999; R 2004) Sampling Chain-Of-Custody Procedures
ASTM E 2114	(2006a) Standard Terminology for Sustainability Relative to the Performance of Buildings

U.S. DEPARTMENT OF AGRICULTURE (USDA)

Biomass R&D Act	(2000) Biomass Research and Development Act
U.S. Farm Bill	(2002) U.S. Farm Bill of May 2002

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

NPDES	(1972; R 2005) National Pollutant Discharge Elimination System

1.2 DEFINITIONS

Definitions pertaining to sustainable development are as defined in ASTM E 2114 and as specified.

a. "Biobased content" is calculated as the weight of the biobased material divided by the total weight of the product, and is expressed as a percentage by weight.

b. "Biobased materials" include fuels, chemicals, building materials, or electric power or heat produced from biomass as defined by the Biomass R&D Act. Minimum biobased content shall be as defined in the U.S. Farm Bill.

c. "Chain-of-custody" is a process whereby a product or material is maintained under the physical possession or control during its entire life cycle.

d. "Pollution and environmental damage" is caused by the presence of chemical, physical, or biological elements or agents. Human health or welfare is adversely affected; ecological balances are unfavorably altered; the utility of the environment for aesthetic, cultural, or historical purposes degrades.

1.3 PRECONSTRUCTION MEETING

After award of Contract and prior to commencement of the work, the Contractor shall schedule and conduct a meeting with the Contracting Officer to discuss the proposed Environmental Protection Plan and to develop a mutual understanding relative to the details of environmental protection.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

SD-07 Certificates

Environmental Regulatory Requirements

For Government's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with environmental regulations bearing on performance of the work.

SD-11 Closeout Submittals

Training Program

Protection of Natural Resources

1.5 CONTRACTOR'S ENVIRONMENTAL MANAGER

Designate an on-site Environmental Manager responsible for overseeing the environmental goals for the project and implementing procedures for environmental protection.

1.5.1 Duties

The Environmental Manager shall be responsible for the following:

a. Compliance with applicable federal, state, and local environmental regulations, including maintaining required documentation.

b. Implementation of the Waste Management Plan.

c. Implementation of the Indoor Air Quality (IAQ) Management Plan.

d. Implementation of the Environmental Protection Plan.

e. Environmental training for Contractor personnel in accordance with their position requirements.

f. Monitoring and documentation of environmental procedures.

1.5.2 Qualifications

Minimum 5 years dredging experience on projects of similar size and scope; minimum 2 years experience with environmental procedures similar to those of this project; familiarity with Environmental Management Systems (EMSs); familiarity with environmental regulations applicable to dredging operations.

1.6 ENVIRONMENTAL REGULATORY REQUIREMENTS

The Contractor shall be responsible for knowing federal, state, and local regulatory requirements pertaining to legal disposal of all dredging and demolition waste materials. Comply with all applicable regulations and maintain records of permits, licenses, certificates, and other environmental regulatory requirement correspondences.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prepare and submit an Environmental Protection Plan not less than 10 days before the preconstruction meeting. At a minimum, address the following elements in accordance with this section:

a. Identification and contact information for Environmental Manager.

b. General site information, including preconstruction description and photographs.

c. Summary of training program.

d. Procedures to address water resources.

e. Procedures to address land resources.

f. Procedures to address air resources.

g. Procedures to address fish and wildlife resources.

h. Monitoring and quality control procedures.

Revise and resubmit Plan as required by the Contracting Officer. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.

1.8 ENVIRONMENTAL DEMONSTRATION AND TRAINING

Contractor shall provide environmental training for workers performing work on the project site.

1.8.1 Instructor Qualifications

Training shall be given by a firm or individual experienced in providing training or education similar in content and extent to that indicated for this project.

1.8.2 Coordination

Coordinate instruction schedule with Government operations. Adjust schedule as required to minimize disruption of Government operations.

Coordinate instruction with demonstration and training of general building systems.

1.8.3 Training Program

Develop a training program for all site workers that includes the following topics:

a. Overview of environmental and sustainability issues related to the building industry.

b. Overview of environmental and sustainability issues related to the project.

c. Compliance with applicable federal, state, and local environmental regulations.

d. Review of site specific procedures and management plans implemented during dredging, including the Waste Management Plan, Indoor Air Quality (IAQ) Management Plan, Environmental Protection Plan, and procedures for noise and acoustics management.

1.8.3.1 Scheduling

Provide instruction at mutually agreeable time[s].

1.8.3.2 Training Modules

Develop a learning objective and teaching outline for each topic in the Training Program. Include a description of specific skills and knowledge that each participant is expected to acquire. Instructors shall be well-versed in the particular topics that they are presenting.

1.8.3.3 Evaluation

At the conclusion of each training module, assess and document each participant's understanding of the module by use of a written performance-based test.

PART 2 PRODUCTS

2.1 ENVIRONMENTALLY PREFERABLE PRODUCTS

Consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and disposal of products, and provide products and materials with the least effect on the environment, determined by LCA analysis, released toxins, and other methods.

2.1.1 Prohibited Materials

The use of the following materials is prohibited:

a. Products containing asbestos.

b. Products containing urea formaldehyde.

c. Products containing polychlorinated biphenyls.

d. Products containing chlorinated fluorocarbons.

e. Solder or flux containing more than 0.2 percent lead and domestic water pipe or pipe fittings containing more than 8 percent lead.

f. Paint or coatings containing more than 0.06 percent lead.

2.1.2 Substitutions

Notify the Contracting Officer when Contractor is aware of materials, equipment, or products that meet the aesthetic and programmatic intent of Contract Documents, but which are more environmentally responsible than materials, equipment, or products specified or indicated in the Contract Documents. Submit the following for initial review by the Contracting Officer:

a. Product data including manufacturer's name, address, and phone number.

b. Description of environmental advantages of proposed substitution over specified product.

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Comply with applicable regulations and these specifications. Preserve the natural resources within the project boundaries and outside the limits of permanent work performed under this Contract in their existing condition or restore to an equivalent or improved condition as approved by the Contracting Officer. Where violation of environmental procedures requirements will irreversibly damage the site, documentation of progress at 1 week intervals shall be required.

3.1.1 General Disturbance

Confine dredging activities to work area limits indicated on the Drawings. Remove debris, rubbish, and other waste materials resulting from dredging operations from site. Transport materials with appropriate vehicles and dispose of them off site to areas that are approved for disposal by governing authorities having jurisdiction. Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways. Remove spillage and sweep, wash, or otherwise clean project site, streets, or highways. Burning is prohibited.

3.1.2 Water Resources

Comply with requirements of the NPDES and the applicable State Pollutant Discharge Elimination System (SPDES). Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water. Store and service dredging equipment at areas designated for collection of oil wastes. Prevent ponding of stagnant water conducive to mosquito breeding habitat.

3.1.3 Fish and Wildlife Resources

Manage and control dredging activities to minimize interference with and damage to fish and wildlife. Do not disturb fish and wildlife. Do not alter water flows or otherwise significantly disturb the native habitat related to the project and critical to the survival of fish and wildlife,

except as indicated or specified.

3.2 FIELD QUALITY CONTROL

Comply with requirements of agencies having jurisdiction and as specified herein. Provide field practices, shipping, and handling of samples in accordance with ASTM D 4840. Provide Field Quality Control Reports in accordance with approved Environmental Protection Plan.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

07/06

listing of organizations whose publications are referenced in other sections of the specifications.

PART 1 GENERAL

1.1 REFERENCES
1.2 ORDERING INFORMATION

-- End of Section Table of Contents --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS
07/06

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)
1800 East Oakton Street
Des Plaines, IL 60018-2187
Ph: 847-699-2929
Fax: 847-768-3434
E-mail: customerservice@asse.org
Internet: http://www.asse.org

ASME INTERNATIONAL (ASME)
Three Park Avenue, M/S 10E
New York, NY 10016
Ph: 212-591-7722 or 800-843-2763
Fax: 212-591-7674
E-mail: infocentral@asme.org
Internet: http://www.asme.org

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9500
Fax: 610-832-9555
E-mail: service@astm.org
Internet: http://www.astm.org

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
Quincy, MA 02169-7471
Ph: 617-770-3000
Fax: 617-770-0700

E-mail: webmaster@nfpa.org
Internet: http://www.nfpa.org

U.S. ARMY CORPS OF ENGINEERS (USACE)
Order CRD-C DOCUMENTS from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services Branch, TIC
3909 Halls Ferry Road
Vicksburg, MS 39180-6199
Ph: 601-634-2664
Fax: 601-634-2388
E-mail: mtc-info@erdc.usace.army.mil
Internet: http://www.wes.army.mil/SL/MTC/handbook.htm

Order Other Documents from:
USACE Publications Depot
Attn: CEHEC-IM-PD
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081
Fax: 301-394-0084
E-mail: pubs-army@usace.army.mil
Internet: http://www.usace.army.mil/publications
or http://www.hnd.usace.army.mil/techinfo/engpubs.htm

U.S. DEPARTMENT OF AGRICULTURE (USDA)
Order AMS Publications from:
AGRICULTURAL MARKETING SERVICE (AMS)
Seed Regulatory and Testing Branch
801 Summit Crossing Place, Suite C
Gastonia, NC 28054-2193
Ph: 704-810-8870
Fax: 704-852-4189
Internet: http://www.ams.usda.gov/lsg/seed.htm
E-mail: seed.ams@usda.gov

Order Other Publications from:
U.S. Department of Agriculture, Rural Utilities Service
14th and Independence Avenue, SW, Room 4028-S
Washington, DC 20250
Ph: 202-720-2791
Fax: 202-720-2166
Internet: http://www.usda.gov/rus

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Ph: 202-272-0167
Internet: http://www.epa.gov

--- Some EPA documents are available only from:
National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
Ph: 703-605-6585
Fax: 703-605-6900
E-mail: info@ntis.gov

Internet: http://www.ntis.gov

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
8601 Adelphi Road
College Park, MD 20740-6001
Ph: 866-272-6272
Fax: 301-837-0483
Internet: http://www.archives.gov

Order documents from:
Superintendent of Documents
U.S.Government Printing Office (GPO)
732 North Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800
Fax: 202-512-2104
E-mail: contactcenter@gpo.gov
Internet: http://www.gpoaccess.gov

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 02

NAVFAC QUALITY CONTROL

04/08

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 INFORMATION FOR THE CONTRACTING OFFICER
1.4 QC PROGRAM REQUIREMENTS
1.4.1 Commissioning
1.4.2 Acceptance of the Dredging Quality Control (QC) Plan
1.4.3 Preliminary Dredging Work Authorized Prior to Acceptance
1.4.4 Notification of Changes
1.5 QC ORGANIZATION
1.5.1 QC Manager
1.5.1.1 Duties
1.5.1.2 Qualifications
1.5.2 Construction Quality Management Training
1.5.3 Alternate QC Manager Duties and Qualifications
1.6 QUALITY CONTROL (QC) PLAN
1.6.1 Dredging Quality Control (QC) Plan
1.6.1.1 Requirements
1.7 QC PLAN MEETINGS
1.8 COORDINATION AND MUTUAL UNDERSTANDING MEETING
1.8.1 Purpose
1.8.2 Coordination of Activities
1.8.3 Attendees
1.9 QC MEETINGS
1.10 THREE PHASES OF CONTROL
1.10.1 Preparatory Phase
1.10.2 Initial Phase
1.10.3 Follow-Up Phase
1.10.4 Additional Preparatory and Initial Phases
1.10.5 Notification of Three Phases of Control for Off-Site Work
1.11 SUBMITTAL REVIEW AND APPROVAL
1.12 TESTING
1.12.1 Accreditation Requirements
1.12.2 Laboratory Accreditation Authorities
1.12.3 Capability Check
1.12.4 Test Results
1.12.5 Test Reports and Monthly Summary Report of Tests
1.13 QC CERTIFICATIONS
1.13.1 CQC Report Certification
1.13.2 Invoice Certification
1.13.3 Completion Certification
1.14 COMPLETION INSPECTIONS
1.14.1 Punch-Out Inspection
1.14.2 Pre-Final Inspection
1.14.3 Final Acceptance Inspection

1.15 DOCUMENTATION
1.15.1 Dredging Documentation
1.15.2 Quality Control Validation
1.15.3 Testing Plan and Log
1.15.4 Rework Items List
1.15.5 As-Built Drawings
1.16 NOTIFICATION ON NON-COMPLIANCE

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 PREPARATION

-- End of Section Table of Contents --

SECTION 01 45 02

NAVFAC QUALITY CONTROL
04/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2003) Safety -- Safety and Health Requirements

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES

SD-01 Predredging Submittals

Dredging Quality Control (QC) Plan; G

Submit a Dredging QC Plan prior to start of dredging.

SD-07 Certificates

CA Resume

SD-10 Operation and Maintenance Data

Training Plan

For each training session submit dates, start and finish times, and locations; outline of the information to be presented; names and qualifications of the presenters; and list of texts and other materials required to support training.

1.3 INFORMATION FOR THE CONTRACTING OFFICER

Prior to commencing work on dredging, the Contractor can obtain a single copy set of the current report forms from the Contracting Officer. The report forms will consist of the Contractor Production Report, Contractor Production Report (Continuation Sheet), Contractor Quality Control (CQC) Report, (CQC) Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Rework Items List, and Testing Plan and Log.

Deliver the following to the Contracting Officer during dredging:

a. CQC Report: Submit the report electronically by 10:00 AM the next working day after each day that work is performed and for every

seven consecutive calendar days of no-work.

b. Contractor Production Report: Submit the report electronically by 10:00 AM the next working day after each day that work is performed and for every seven consecutive calendar days of no-work.

c. Preparatory Phase Checklist: Submit the report electronically in the same manner as the CQC Report for each Preparatory Phase held.

d. Initial Phase Checklist: Submit the report electronically in the same manner as the CQC Report for each Initial Phase held. Original attached to the original CQC Report and one copy attached to each QC Report copy.

e. Field Test Reports: Within two working days after the test is performed, submit the report as an electronic attachment to the CQC Report.

f. Testing Plan and Log: Submit the report as an electronic attachment to the CQC Report, at the end of each month. A copy of the final Testing Plan and Log shall be provided to the OMSI preparer for inclusion into the OMSI documentation.

g. Rework Items List: Submit lists containing new entries daily, in the same manner as the CQC Report.

h. CQC Meeting Minutes: Within two working days after the meeting is held, submit the report as an electronic attachment to the CQC Report.

i. QC Certifications: As required by the paragraph entitled "QC Certifications."

1.4 QC PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. This QC program is a key element in meeting the objectives of NAVFAC Commissioning. The QC program consists of a QC Organization, QC Plan, QC Plan Meeting(s), a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, completion inspections, and QC certifications and documentation necessary to provide materials, equipment, workmanship, fabrication, dredging and operations which comply with the requirements of this Contract. The QC program must cover on-site and off-site work and be keyed to the work sequence. No dredging work or testing may be performed unless the QC Manager is on the work site. The QC Manager must report to an officer of the firm and not be subordinate to the Project Superintendent or the Project Manager. The QC Manager, Project Superintendent and Project Manager must work together effectively. Although the QC Manager is the primary individual responsible for quality control, all individuals will be held responsible for the quality of work on the job.

1.4.1 Commissioning

Commissioning (Cx) is a systematic process of ensuring that all building systems meet the requirements and perform interactively according to the Contract. The QC Program is a key to this process by coordinating, verifying and documenting measures to achieve the following objectives:

a. Verify and document that the applicable equipment and systems are installed in accordance with the design intent as expressed through the Contract and according to the manufacturer's recommendations and industry accepted minimum standards.

b. Verify and document that equipment and systems receive complete operational checkout by the installing contractors.

c. Verify and document proper performance of equipment and systems.

d. Verify that Operation and Maintenance (O&M) documentation is complete.

e. Verify and document that the Government's operating personnel are adequately trained.

1.4.2 Acceptance of the Dredging Quality Control (QC) Plan

Acceptance of the QC Plan is required prior to the start of dredging. The Contracting Officer reserves the right to require changes in the QC Plan and operations as necessary, including removal of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview any member of the QC organization at any time in order to verify the submitted qualifications. All QC organization personnel are subject to acceptance by the Contracting Officer. The Contracting Officer may require the removal of any individual for non-compliance with quality requirements specified in the Contract.

1.4.3 Preliminary Dredging Work Authorized Prior to Acceptance

The only dredging work that is authorized to proceed prior to the acceptance of the QC Plan is mobilization of storage and office trailers, temporary utilities, and surveying.

1.4.4 Notification of Changes

Notify the Contracting Officer, in writing, of any proposed changes in the QC Plan or changes to the QC organization personnel, a minimum of 10 work days prior to a proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

1.5 QC ORGANIZATION

1.5.1 QC Manager

1.5.1.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. The QC Manager is required to attend the partnering meetings, QC Plan Meetings, Coordination and Mutual Understanding Meeting, conduct the QC meetings, perform the three phases of control, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this Contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by testing laboratory personnel and any other inspection and testing personnel required by this Contract. The QC Manager is the manager of all QC activities.

1.5.1.2 Qualifications

An individual with a minimum of 5 years combined experience in the following positions: Project Superintendent, QC Manager, Project Manager, Project Engineer or Construction Manager on similar size and type dredging contracts which included the major trades that are part of this Contract. The individual must have at least two years experience as a QC Manager. The individual must be familiar with the requirements of EM 385-1-1, and have experience in the areas of hazard identification, safety compliance, and sustainability.

1.5.2 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager must have completed the course entitled "Construction Quality Management (CQM) for Contractors." If the QC Manager does not have a current certification, they must obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Naval Facilities Engineering Command and the Army Corps of Engineers. Contact the Contracting Officer for information on the next scheduled class.

1.5.3 Alternate QC Manager Duties and Qualifications

Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. The period of absence may not exceed two weeks at one time, and not more than 30 workdays during a calendar year. The qualification requirements for the Alternate QC Manager must be the same as for the QC Manager.

1.6 QUALITY CONTROL (QC) PLAN

1.6.1 Dredging Quality Control (QC) Plan

1.6.1.1 Requirements

Provide, for acceptance by the Contracting Officer, a Dredging QC Plan submitted in a three-ring binder that includes a table of contents, with major sections identified with tabs, with pages numbered sequentially, and that documents the proposed methods and responsibilities for accomplishing commissioning activities during the dredging project:

a. QC ORGANIZATION: A chart showing the QC organizational structure.

b. NAMES AND QUALIFICATIONS: Names and qualifications, in resume format, for each person in the QC organization. Include the CQM for Contractors course certifications for the QC Manager and Alternate QC Manager as required by the paragraphs entitled "Construction Quality Management Training" and "Alternate QC Manager Duties and Qualifications".

c. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL: Duties, responsibilities, and authorities of each person in the QC organization.

d. OUTSIDE ORGANIZATIONS: A listing of outside organizations, such as architectural and consulting engineering firms, that will be employed by the Contractor and a description of the services these firms will provide.

e. APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager and stating that they are responsible for implementing and managing the QC program as described in this Contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of control, and their authority to stop work which is not in compliance with the Contract. Letters of direction are to be issued by the QC Manager to all other QC Specialists outlining their duties, authorities, and responsibilities. Include copies of the letters in the QC Plan.

f. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER: Procedures for reviewing, approving, and managing submittals. Provide the name(s) of the person(s) in the QC organization authorized to review and certify submittals prior to approval. Provide the initial submittal of the Submittal Register as specified in Section 01 33 00 SUBMITTAL PROCEDURES.

g. TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraphs entitled "Accreditation Requirements", as applicable.

h. TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test. Use Government forms to log and track tests.

i. PROCEDURES TO COMPLETE REWORK ITEMS: Procedures to identify, record, track, and complete rework items. Use Government forms to record and track rework items.

j. DOCUMENTATION PROCEDURES: Use Government form.

k. LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task that is separate and distinct from other tasks and has control requirements and work crews unique to that task. A DFOW is identified by different trades or disciplines and is an item or activity on the dredging schedule. Include in the list of DFOWs, but not be limited to, all critical path activities on the NAS. Include all activities for which this specification requires QC Specialists or specialty inspection personnel. Provide separate DFOWs in the Network Analysis Schedule for each design development stage and submittal package.

l. PROCEDURES FOR PERFORMING THE THREE PHASES OF CONTROL: Identify procedures used to ensure the three phases of control to manage the quality on this project. For each DFOW, a Preparatory and Initial phase checklist will be filled out during the Preparatory and Initial phase meetings. Conduct the Preparatory and Initial Phases and meetings with a view towards obtaining quality dredging by planning ahead and identifying potential problems for each DFOW.

m. PERSONNEL MATRIX: Not Applicable

n. PROCEDURES FOR COMPLETION INSPECTION: Procedures for identifying and documenting the completion inspection process. Include in these procedures the responsible party for punch out inspection,

pre-final inspection, and final acceptance inspection.

o. ORGANIZATION AND PERSONNEL CERTIFICATIONS LOG: Procedures for coordinating, tracking and documenting all certifications on subcontractors, testing laboratories, suppliers, personnel, etc. QC Manager will ensure that certifications are current, appropriate for the work being performed, and will not lapse during any period of the contract that the work is being performed.

1.7 QC PLAN MEETINGS

At the discretion of the FEAD/ROICC and prior to submission of the QC Plan, the QC Manager will meet with the Contracting Officer to discuss the QC Plan requirements of this Contract. The purpose of this meeting is to develop a mutual understanding of the QC Plan requirements prior to plan development and submission and to agree on the Contractor's list of DFOWs.

1.8 COORDINATION AND MUTUAL UNDERSTANDING MEETING

After submission of the QC Plan, and prior to the start of dredging, the QC Manager will meet with the Contracting Officer to present the QC program required by this Contract. When a new QC Manager is appointed, the coordination and mutual understanding meeting shall be repeated.

1.8.1 Purpose

The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, design intent, Cx, environmental requirements and procedures, coordination of activities to be performed, and the coordination of the Contractor's management, production, and QC personnel. At the meeting, the Contractor will be required to explain in detail how three phases of control will be implemented for each DFOW, as well as how each DFOW will be affected by each management plan or requirement as listed below:

a. Waste Management Plan.

b. IAQ Management Plan.

c. Procedures for noise and acoustics management.

d. Environmental Protection Plan.

e. Environmental regulatory requirements.

f. Cx Plan.

1.8.2 Coordination of Activities

Coordinate activities included in various sections to assure efficient and orderly installation of each component. Coordinate operations included under different sections that are dependent on each other for proper installation and operation. Schedule dredging operations with consideration for indoor air quality as specified in the IAQ Management Plan. Coordinate prefunctional tests and startup testing with Cx.

1.8.3 Attendees

As a minimum, the Contractor's personnel required to attend include an officer of the firm, the Project Manager, Project Superintendent, QC Manager, Alternate QC Manager, CA, Environmental Manager, and subcontractor representatives. Each subcontractor who will be assigned QC responsibilities shall have a principal of the firm at the meeting. Minutes of the meeting will be prepared by the QC Manager and signed by the Contractor and the Contracting Officer. Provide a copy of the signed minutes to all attendees and shall be included in the QC Plan.

1.9 QC MEETINGS

After the start of dredging, conduct QC meetings once every two weeks by the QC Manager at the work site with the Project Superintendent, the CA, and the foremen who are performing the work of the DFOWs. The QC Manager is to prepare the minutes of the meeting and provide a copy to the Contracting Officer within two working days after the meeting. The Contracting Officer may attend these meetings. As a minimum, accomplish the following at each meeting:

a. Review the minutes of the previous meeting.

b. Review the schedule and the status of work and rework.

c. Review the status of submittals.

d. Review the work to be accomplished in the next two weeks and documentation required.

e. Resolve QC and production problems (RFI, etc.).

f. Address items that may require revising the QC Plan.

g. Review Accident Prevention Plan (APP).

h. Review environmental requirements and procedures.

i. Review Waste Management Plan.

j. Review IAQ Management Plan.

k. Review Environmental Management Plan.

l. Review the status of training completion.

m. Review Cx Plan and progress.

1.10 THREE PHASES OF CONTROL

Adequately cover both on-site and off-site work with the Three Phases of Control and include the following for each DFOW.

1.10.1 Preparatory Phase

Notify the Contracting Officer at least two work days in advance of each preparatory phase meeting. The meeting will be conducted by the QC Manager and attended by the Project Superintendent, the CA, and the foreman responsible for the DFOW. When the DFOW will be accomplished by a

subcontractor, that subcontractor's foreman shall attend the preparatory phase meeting. Document the results of the preparatory phase actions in the Preparatory Phase Checklist. Perform the following prior to beginning work on each DFOW:

a. Review each paragraph of the applicable specification sections.

b. Review the Contract drawings.

c. Verify that field measurements are as indicated on dredging and/or shop drawings before confirming product orders, in order to minimize waste due to excessive materials.

d. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required.

e. Review the testing plan and ensure that provisions have been made to provide the required QC testing.

f. Examine the work area to ensure that the required preliminary work has been completed.

g. Coordinate the schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

h. Arrange for the return of shipping/packaging materials, such as wood pallets, where economically feasible.

i. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data.

j. Discuss specific controls used and dredging methods, dredging tolerances, workmanship standards, and the approach that will be used to provide quality dredging by planning ahead and identifying potential problems for each DFOW.

k. Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted.

l. Review the Cx Plan and ensure all preliminary work items have been completed and documented.

1.10.2 Initial Phase

Notify the Contracting Officer at least two work days in advance of each initial phase. When dredging crews are ready to start work on a DFOW, conduct the initial phase with the Project Superintendent, and the foreman responsible for that DFOW. Observe the initial segment of the DFOW to ensure that the work complies with Contract requirements. Document the results of the initial phase in the Initial Phase Checklist. Repeat the initial phase for each new crew to work on-site, or when acceptable levels of specified quality are not being met. Perform the following for each DFOW:

a. Establish the quality of workmanship required.

b. Resolve conflicts.

c. Ensure that testing is performed by the approved laboratory.

d. Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.

e. Review the Cx Plan and ensure all preparatory work items have been completed and documented.

1.10.3 Follow-Up Phase

Perform the following for on-going work daily, or more frequently as necessary, until the completion of each DFOW and document in the daily CQC Report:

a. Ensure the work is in compliance with Contract requirements.

b. Maintain the quality of workmanship required.

c. Ensure that testing is performed by the approved laboratory.

d. Ensure that rework items are being corrected.

e. Assure manufacturers representatives have performed necessary inspections if required and perform safety inspections.

f. Review the Cx Plan and ensure all work items, testing, and documentation has been completed.

1.10.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW is resumed after substantial period of inactivity, or if other problems develop.

1.10.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least two weeks prior to the start of the preparatory and initial phases.

1.11 SUBMITTAL REVIEW AND APPROVAL

Procedures for submission, review and approval of submittals are described in Section 01 33 00 SUBMITTAL PROCEDURES.

1.12 TESTING

Except as stated otherwise in the specification sections, perform sampling and testing required under this Contract.

1.12.1 Accreditation Requirements

Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of

the Certificate of Accreditation and Scope of Accreditation. The laboratory's scope of accreditation must include the appropriate ASTM standards (E 329, C 1077, D 3666, D 3740, A 880, E 543) listed in the technical sections of the specifications. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA. The policy applies to the specific laboratory performing the actual testing, not just the Corporate Office.

1.12.2 Laboratory Accreditation Authorities

Laboratory Accreditation Authorities include the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology at http://ts.nist.gov/ts/htdocs/210/214/214.htm , the American Association of State Highway and Transportation Officials (AASHTO) program at http://www.transportation.org/aashto/home.nsf/frontpage , International Accreditation Services, Inc. (IAS) at http://www.iasonline.org, U. S. Army Corps of Engineers Materials Testing Center (MTC)at http://www.wes.army.mil/SL/MTC/, the American Association for Laboratory Accreditation (A2LA) program at http://www.a2la.org/, the Washington Association of Building Officials (WABO) at http://www.wabo.org/ (Approval authority for WABO is limited to projects within Washington State), and the Washington Area Council of Engineering Laboratories (WACEL) at http://www.wacel.org/labaccred.html (Approval authority by WACEL is limited to projects within Facilities Engineering Command (FEC) Washington geographical area).

1.12.3 Capability Check

The Contracting Officer retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this Contract.

1.12.4 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify the Contracting Officer immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results must be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer via the QC Manager. Furnish a summary report of field tests at the end of each month, per the paragraph entitled "INFORMATION FOR THE CONTRACTING OFFICER".

1.12.5 Test Reports and Monthly Summary Report of Tests

Furnish the signed reports, certifications, and a summary report of field tests at the end of each month to the Contracting Officer. Attach a copy of the summary report to the last daily Contractor Quality Control Report of each month. Provide a copy of the signed test reports and certifications to the OMSI preparer for inclusion into the OMSI documentation.

1.13 QC CERTIFICATIONS

1.13.1 CQC Report Certification

Contain the following statement within the CQC Report: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report."

1.13.2 Invoice Certification

Furnish a certificate to the Contracting Officer with each payment request, signed by the QC Manager, attesting that as-built drawings are current, coordinated and attesting that the work for which payment is requested, including stored material, is in compliance with Contract requirements.

1.13.3 Completion Certification

Upon completion of work under this Contract, the QC Manager shall furnish a certificate to the Contracting Officer attesting that "the work has been completed, inspected, tested and is in compliance with the Contract." Provide a copy of this final QC Certification for completion to the OMSI preparer for inclusion into the OMSI documentation.

1.14 COMPLETION INSPECTIONS

1.14.1 Punch-Out Inspection

Near the completion of all work or any increment thereof, established by a completion time stated in the Contract Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QC Manager and the CA must conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings, specifications and Contract. Include in the punch list any remaining items on the "Rework Items List", which were not corrected prior to the Punch-Out Inspection. Include within the punch list the estimated date by which the deficiencies will be corrected. Provide a copy of the punch list to the Contracting Officer. The QC Manager, or staff, must make follow-on inspections to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government "Pre-Final Inspection".

1.14.2 Pre-Final Inspection

The Government and QCM will perform this inspection to verify that the facility is complete and ready to be occupied. A Government "Pre-Final Punch List" will be documented by the CQM as a result of this inspection. The QC Manager will ensure that all items on this list are corrected prior to notifying the Government that a "Final" inspection with the Client can be scheduled. Any items noted on the "Pre-Final" inspection must be corrected in a timely manner and be accomplished before the contract completion date for the work,or any particular increment thereof, if the project is divided into increments by separate completion dates.

1.14.3 Final Acceptance Inspection

Notify the Contracting Officer at least 14 calendar days prior to the date a final acceptance inspection can be held. State within the notice that all

items previously identified on the pre-final punch list will be corrected and acceptable, along with any other unfinished Contract work, by the date of the final acceptance inspection. The Contractor must be represented by the QC Manager, the Project Superintendent, the CA, and others deemed necessary. Attendees for the Government will include the Contracting Officer, other FEAD/ROICC personnel, and personnel representing the Client. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the Contract Clause entitled "Inspection of Construction."

1.15 DOCUMENTATION

Maintain current and complete records of on-site and off-site QC program operations and activities.

1.15.1 Dredging Documentation

Reports are required for each day that work is performed and must be attached to the Contractor Quality Control Report prepared for the same day. Maintain current and complete records of on-site and off-site QC program operations and activities. The forms identified under the paragraph "INFORMATION FOR THE CONTRACTING OFFICER" will be used. Reports are required for each day work is performed. Account for each calendar day throughout the life of the Contract. Every space on the forms must be filled in. Use N/A if nothing can be reported in one of the spaces. The Project Superintendent and the QC Manager must prepare and sign the Contractor Production and CQC Reports, respectively. The reporting of work must be identified by terminology consistent with the dredging schedule. In the "remarks" sections of the reports, enter pertinent information including directions received, problems encountered during dredging, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the work site, quality control problem areas, deviations from the QC Plan, dredging deficiencies encountered, meetings held. For each entry in the report(s), identify the Schedule Activity No. that is associated with the entered remark.

1.15.2 Quality Control Validation

Establish and maintain the following in a series of three ring binders. Binders shall be divided and tabbed as shown below. These binders must be readily available to the Contracting Officer during all business hours.

a. All completed Preparatory and Initial Phase Checklists, arranged by specification section.

b. All milestone inspections, arranged by Activity Number.

c. An up-to-date copy of the Testing Plan and Log with supporting field test reports, arranged by specification section.

d. Copies of all contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.

e. An up-to-date copy of the Rework Items List.

f. Maintain up-to-date copies of all punch lists issued by the QC staff to the Contractor and Sub-Contractors and all punch lists issued by the Government.

g. Commissioning documentation including Cx checklists, schedules, tests, and reports.

1.15.3 Testing Plan and Log

As tests are performed, the CA and the QC Manager will record on the "Testing Plan and Log" the date the test was performed and the date the test results were forwarded to the Contracting Officer. Attach a copy of the updated "Testing Plan and Log" to the last daily CQC Report of each month, per the paragraph "INFORMATION FOR THE CONTRACTING OFFICER". Provide a copy of the final "Testing Plan and Log" to the OMSI preparer for inclusion into the OMSI documentation.

1.15.4 Rework Items List

The QC Manager must maintain a list of work that does not comply with the Contract, identifying what items need to be reworked, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected. There is no requirement to report a rework item that is corrected the same day it is discovered. The Contractor is responsible for including those items identified by the Contracting Officer.

1.15.5 As-Built Drawings

The QC Manager is required to ensure the as-built drawings, required by Section 01 78 00 CLOSEOUT SUBMITTALS are kept current on a daily basis and marked to show deviations which have been made from the Contract drawings. Ensure each deviation has been identified with the appropriate modifying documentation (e.g. PC No., Modification No., Request for Information No., etc.). The QC Manager must initial each revision. Upon completion of work, the QC Manager will furnish a certificate attesting to the accuracy of the as-built drawings prior to submission to the Contracting Officer.

1.16 NOTIFICATION ON NON-COMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the Contract. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time for excess costs or damages by the Contractor.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PREPARATION

Designate receiving/storage areas for incoming material to be delivered according to installation schedule and to be placed convenient to work area

in order to minimize waste due to excessive materials handling and misapplication. Store and handle materials in a manner as to prevent loss from weather and other damage. Keep materials, products, and accessories covered and off the ground, and store in a dry, secure area. Prevent contact with material that may cause corrosion, discoloration, or staining. Protect all materials and installations from damage by the activities of other trades.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 57 20.00 10

ENVIRONMENTAL PROTECTION

04/06

environment protection during construction activities

PART 1 GENERAL

1.1 REFERENCES
1.2 DEFINITIONS
1.2.1 Environmental Pollution and Damage
1.2.2 Environmental Protection
1.2.3 Contractor Generated Hazardous Waste
1.2.4 Land Application for Discharge Water
1.2.5 Surface Discharge
1.2.6 Waters of the United States
1.2.7 Wetlands
1.3 GENERAL REQUIREMENTS
1.4 SUBCONTRACTORS
1.5 PAYMENT
1.6 SUBMITTALS
1.7 ENVIRONMENTAL PROTECTION PLAN
1.7.1 Compliance
1.7.2 Contents
1.7.3 Appendix
1.8 PROTECTION FEATURES
1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS
1.10 NOTIFICATION

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS
3.2 LAND RESOURCES
3.2.1 Work Area Limits
3.2.2 Landscape
3.2.3 Erosion and Sediment Controls
3.2.4 Contractor Facilities and Work Areas
3.3 WATER RESOURCES
3.3.1 Wetlands
3.4 AIR RESOURCES
3.4.1 Particulates
3.4.2 Odors
3.4.3 Sound Intrusions
3.4.4 Burning
3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL
3.5.1 Solid Wastes

3.5.2 Chemicals and Chemical Wastes
3.5.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials
3.5.4 Fuel and Lubricants
3.5.5 Waste Water
3.6 BIOLOGICAL RESOURCES
3.7 PREVIOUSLY USED EQUIPMENT
3.8 MAINTENANCE OF POLLUTION FACILITIES
3.9 MILITARY MUNITIONS
3.10 TRAINING OF CONTRACTOR PERSONNEL
3.11 POST DREDGING CLEANUP

-- End of Section Table of Contents --

SECTION 01 57 20.00 10

ENVIRONMENTAL PROTECTION
04/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2003) Safety -- Safety and Health Requirements
WETLAND MANUAL	Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions of Waters of the United States
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
40 CFR 68	Chemical Accident Prevention Provisions
49 CFR 171 - 178	Hazardous Materials Regulations

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during dredging. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of dredging. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners,excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor must discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Land Application must be in compliance with all applicable Federal, State, and local laws and regulations.

1.2.5 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers,creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

1.2.6 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.7 Wetlands

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

1.3 GENERAL REQUIREMENTS

Minimize environmental pollution and damage that may occur as the result of dredging operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work must be protected during the entire duration of this contract. Comply with all applicable environmental Federal, State, and local laws and regulations. Any delays resulting from failure to comply with environmental laws and

regulations will be the Contractor's responsibility.

1.4 SUBCONTRACTORS

Ensure compliance with this section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. Payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor, and payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations are the Contractor's responsibility. All costs associated with this section must be included in the contract price.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

The environmental protection plan.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing dredging activities or delivery of materials to the site, submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during dredging. Issues of concern must be defined within the Environmental Protection Plan as outlined in this section. Address each topic at a level of detail commensurate with the environmental issue and required dredging task(s). Topics or issues which are not identified in this section, but are considered necessary, must be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan must be current and maintained onsite by the Contractor.

1.7.1 Compliance

No requirement in this Section will relieve the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During dredging, the Contractor will be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

Include in the environmental protection plan, but not limit it to, the following:

a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.

b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.

c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.

d. Description of the Contractor's environmental protection personnel training program.

e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan must include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment control plan, Federal, State, and local laws and regulations. A Storm Water Pollution Prevention Plan (SWPPP) may be substituted for this plan.

f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.

g. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

h. Include in the Spill Control plan the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations.

i. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris and schedules for disposal.

1). Identify any subcontractors responsible for the transportation and disposal of solid waste. Submit licenses or permits for solid waste disposal sites that are not a commercial operating facility.

2). Evidence of the disposal facility's acceptance of the solid waste must be attached to this plan during the dredging. Attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. Submit the report for the previous quarter on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted (e.g. the first working day of January, April, July, and October).

3). Indicate in the report the total amount of waste generated and total amount of waste diverted in cubic yards or tons along with the percent that was diverted.

4). A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. Detail in the plan the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

j. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

k. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be onsite at any given time must be included in the contaminant prevention plan. Update the plan as new hazardous materials are brought onsite or removed from the site.

l. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from dredging activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan must include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan must include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, include a copy of the permit and associated documents as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan must include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

m. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during dredging. Include in the plan methods to assure the protection of known or discovered resources, identifying lines of communication between Contractor personnel and the Contracting Officer.

1.7.3 Appendix

Attach to the Environmental Protection Plan, as an appendix, copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents.

1.8 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING

VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite dredging activities, the Contractor and the Contracting Officer will make a joint condition survey. Immediately following the survey, the Contractor will prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report will be signed by both the the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor must protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the work under the contract.

1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations from the drawings,plans and specifications, requested by the Contractor and which may have an environmental impact, will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.10 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. After receipt of such notice, the Contractor will inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or equitable adjustments allowed for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

This paragraph supplements the Contractor's responsibility under the contract clause "PERMITS AND RESPONSIBILITIES" to the extent that the Government has obtained the dredging permit(s). Comply with the terms and conditions of the dredging permit specification attached to the back of the Section 35 20 23 "DREDGING".

3.2 LAND RESOURCES

Confine all activities to areas defined by the drawings and specifications. Identify any land resources to be preserved within the work area prior to the beginning of any dredging. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines,

grasses, topsoil, and land forms without approval, except in areas indicated on the drawings or specified to be cleared. Ropes, cables, or guys will not be fastened to or attached to any trees for anchorage unless specifically authorized. Provide effective protection for land and vegetation resources at all times, as defined in the following subparagraphs. Remove stone, soil, or other materials displaced into uncleared areas.

3.2.1 Work Area Limits

Mark the areas that need not be disturbed under this contract prior to commencing dredging activities. Mark or fence isolated areas within the general work area which are not to be disturbed. Protect monuments and markers before dredging operations commence. Where dredging operations are to be conducted during darkness, any markers must be visible in the dark. The Contractor's personnel must be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved must be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. Restore landscape features damaged or destroyed during dredging operations outside the limits of the approved work area.

3.2.3 Erosion and Sediment Controls

Providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations is the Contractor's responsibility. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of dredging activities.

3.2.4 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities will be made only when approved. Erosion and sediment controls must be provided for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas must be controlled to protect adjacent areas.

3.3 WATER RESOURCES

Monitor all water areas affected by dredging activities to prevent pollution of surface and ground waters. Do not apply toxic or hazardous chemicals to soil or vegetation unless otherwise indicated. For dredging activities immediately adjacent to impaired surface waters, the Contractor must be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits.

3.3.1 Wetlands

D0 not enter, disturb, destroy, or allow discharge of contaminants into any wetlands.

3.4 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction and dredging activities; and processing and preparation of materials, such as from asphaltic batch plants; must be controlled at all times, including weekends, holidays and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with all State and local visibility regulations.

3.4.2 Odors

Odors from dredging activities must be controlled at all times. The odors must be in compliance with State regulations and/or local ordinances and may not constitute a health hazard.

3.4.3 Sound Intrusions

Keep dredging activities under surveillance and control to minimize environment damage by noise.

3.4.4 Burning

Burning is prohibited on the Government premises.

3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes will be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.5.1 Solid Wastes

Place solid wastes other than dredged materials in containers which are emptied on a regular schedule. Handling, storage, and disposal must be conducted to prevent contamination. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with solid waste. Transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill will be the minimum acceptable offsite solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.5.2 Chemicals and Chemical Wastes

Dispense chemicals ensuring no spillage to the ground or water. Perform and document periodic inspections of dispensing areas to identify leakage and initiate corrective action. This documentation will be periodically reviewed by the Government. Collect chemical waste in corrosion resistant, compatible containers. Collection drums must be monitored and removed to a staging or storage area when contents are within 6 inches of the top. Wastes will be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

3.5.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. At a minimum, manage and store hazardous waste in compliance with 40 CFR 262 in accordance with the Project Office hazardous waste management plan. Take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. Segregate hazardous waste from other materials and wastes, protect it from the weather by placing it in a safe covered location, and take precautionary measures such as berming or other appropriate measures against accidental spillage. Storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations is the Contractor's responsibility. Transport Contractor generated hazardous waste off Government property within 60 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. Dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials must be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills are the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

3.5.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles must be conducted in a manner that affords the maximum protection against spill and evaporation. Manage and store fuel, lubricants and oil in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded must be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Storage of fuel on the project site will be in accordance with all Federal, State, and local laws and regulations.

3.5.5 Waste Water

Disposal of waste water will be as specified below.

a. Waste water from dredging activities will not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the dredging related waste water off-Government property in accordance with all Federal, State, Regional and Local laws and regulations.

3.6 BIOLOGICAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The protection of threatened and endangered animal and plant species, including their habitat, is the Contractor's responsibility in accordance with Federal, State, Regional, and local laws and regulations.

3.7 PREVIOUSLY USED EQUIPMENT

Clean all previously used dredging equipment prior to bringing it onto the project site. Ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the USDA jurisdictional office for additional cleaning requirements.

3.8 MAINTENANCE OF POLLUTION FACILITIES

Maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time dredging activities create the particular pollutant.

3.9 MILITARY MUNITIONS

In the event military munitions, as defined in 40 CFR 260, are discovered or uncovered, the Contractor will immediately stop work in that area and immediately inform the Contracting Officer.

3.10 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel must be trained in all phases of environmental protection and pollution control. Conduct environmental protection/pollution control meetings for all personnel prior to commencing dredging activities. Additional meetings must be conducted for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.11 POST DREDGING CLEANUP

The Contractor will clean up all areas used for dredging and related operations in accordance with Contract Clause: "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of dredging and related operations prior to final acceptance of the work. The disturbed area must be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 20 23

DREDGING

04/06

dredging

PART 1 GENERAL

1.1 DEFINITION
1.2 SUBMITTALS
1.3 MATERIAL TO BE REMOVED
1.3.1 Hard Material
1.4 ARTIFICIAL OBSTRUCTIONS
1.5 UPLAND DISPOSAL
1.6 QUANTITY OF MATERIAL
1.6.1 Contaminated Material For Upland Disposal
1.7 OVERDEPTH DREDGING
1.8 SIDE SLOPES
1.9 PERMIT
1.10 CHARGES
1.11 ENVIRONMENTAL PROTECTION REQUIREMENTS
1.12 BASIS FOR BIDS

PART 2 PRODUCTS

2.1 BUCKET FOR EXCAVATION

PART 3 EXECUTION

3.1 INSPECTION
3.2 CONDUCT OF DREDGING WORK
3.2.1 Order of Work
3.2.2 Interference with Navigation
3.2.2.1 Federal Channel Requirements
3.2.2.2 Compensation for Interruption of Operations
3.2.3 Lights
3.2.4 Ranges, Gages, and Lines
3.2.5 Plant
3.2.6 Disposal of Excavated Material
3.2.6.1 Method of Disposal
3.2.6.2 Scow Dewatering Procedures
3.2.7 Navigation Warnings
3.2.8 Method of Communication
3.2.9 Salvaged Material
3.2.10 Safety of Structures
3.2.11 Plant Removal
3.3 MEASUREMENT
3.3.1 Method of Measurement
3.3.2 Surveys During Progress of Work

3.3.3 Sampling
3.3.4 Monthly Estimates
3.4 FINAL EXAMINATION AND ACCEPTANCE

-- End of Section Table of Contents --

SECTION 35 20 23

DREDGING
04/06

PART 1 GENERAL

1.1 DEFINITION

Hard material is defined as material requiring blasting or the use of special equipment for economical removal, and includes boulders or fragments too large to be removed in one piece by the dredge.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Dredging Plan; G

Indicate dredging barge location for each area dredged, any intended tender boat docking, buoy placement as applicable and all other dredging operations that have affect on waterfront operations.

Bucket for Dredging; G

Contractor shall use a "Environmental Bucket with a gasket seal for all dredging, excavation and sand fill placement on this project. Bucket shall be guided by use of a Differential Global Positioning System (DGPS) in order to facilitate accurate horizontal positioning in accordance with the coordinates shown on the plan. Vertical positioning of the bucket shall be guided by use of a depth gauge. Contractor shall submit to government for approval specifications of the DGPS and depth gauge equipment to be utilized prior to beginning dredging.

SD-07 Certificates

Protection Plan

1.3 MATERIAL TO BE REMOVED

The material to be removed is silt and mud.

1.3.1 Hard Material

The removal of hard material is not included. Should the Government direct in writing that hard material be removed, the work shall be performed and an adjustment in the contract price or time for completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions." If hard material is to be removed, blasting will not be permitted.

1.4 ARTIFICIAL OBSTRUCTIONS

Except as indicated, the Government has no knowledge of cables, pipes, or other artificial obstructions or of any wrecks, wreckage, or other material that would necessitate the use of explosives or the employment of additional equipment for economical removal. If actual conditions differ from those stated or shown, or both, an adjustment in contract price or time for completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions."

1.5 UPLAND DISPOSAL

Incorporated into the Dredging Plans, on sheet V-301, is the dredged material management plan. All dredged material shall be transported, dewatered and disposed of in accordance with the Dredge Material Management Plan.

1.6 QUANTITY OF MATERIAL

1.6.1 Contaminated Material For Upland Disposal

The total estimated amount of material to be removed by bucket dredge from within the specified limits, including side slopes but excluding overdepth, shall be as shown in the project drawings. The maximum amount of allowable overdepth dredging shall be as shown in the project drawings. The estimated quantity for bidding purposes and for application of the "FAR 52.212-11, Variation in Estimated Quantity" shall be as shown in the project drawings, which is the total quantity, including 1 foot overdepth. The quantities listed are estimates only. Within the limits of available funds, complete the work specified whether the quantities involved are greater or less than those estimated.

1.7 OVERDEPTH DREDGING

To cover unavoidable inaccuracies of dredging processes, material actually removed to a depth of 1 feet below the depth specified and within the dredging limits will be measured and paid for at full contract price.

1.8 SIDE SLOPES

Dredging on side slopes shall follow, as closely as practicable, the lines indicated or specified. A 1 foot allowance will be made for dredging beyond the indicated or specified side slopes, except as provided herein. The amount of material excavated from side slopes will be determined by either cross-sections or computer, or both.

1.9 PERMIT

The Contractor shall comply with conditions and requirements of the Corps of Engineers Permit and other State or Federal permits. Copy of permits are attached at the end of this specification section.

1.10 CHARGES

The contractor shall pay all charges imposed by the Port Weanack Dredge Material Handling Facility and the Charles City Landfill Facility related to material handling and disposal.

1.11 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain during the life of the contract, environmental protective measures. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution.

1.12 BASIS FOR BIDS

Payment will be at the contract unit price per cubic yard, multiplied by total cubic yards of acceptable dredging. Base bids on total cubic yards of dredging as indicated. Include a bid unit price per cubic yard of dredging based on the quantity as specified or indicated. If the Contracting Officer requires an increase or a decrease in total volume of dredging, the contract price will be adjusted in accordance with the "FAR 52.211-18, Variation in Estimated Quantity." Dredging conditions specified and indicated describe conditions which are known. However, the Contractor is responsible for other conditions encountered which are not unusual when compared to conditions recognized in the dredging business as usual in dredging activities such as those required under this contract.

PART 2 PRODUCTS

2.1 BUCKET FOR EXCAVATION

Contractor shall use an "environmental bucket" for all excavation work. Bucket shall be guided by use of a Differential Global Positioning System (DGPS) in order to facilitate accurate horizontal positioning in accordance with the coordinates shown on the plan. Vertical positioning of the bucket shall be guided by use of a depth gauge. Contractor shall submit to government for approval specifications of the DGPS and depth gauge equipment to be utilized.

PART 3 EXECUTION

3.1 INSPECTION

Inspect the work, keep records of work performed, and ensure that gages, targets, ranges, and other markers are in place and usable for the intended purpose. Furnish, at the request of the Contracting Officer, boats, boatmen, laborers, and materials necessary for inspecting, supervising, and surveying the work. When required, provide transportation for the Contracting Officer and inspectors to and from the disposal area and between the dredging plant and adjacent points on shore.

3.2 CONDUCT OF DREDGING WORK

3.2.1 Order of Work

The Contracting Officer will direct the Contractor on the order of work. The Government reserves the right to change the order of work at any time.

3.2.2 Interference with Navigation

Minimize interference with the use of channels and passages. The Contracting Officer will direct the shifting or moving of dredges or the interruption of dredging operations to accommodate the movement of vessels and floating equipment, if necessary.

3.2.2.1 Federal Channel Requirements

Contractor shall be aware that work adjacent to federal channels shall require them to coordinate with all maritime entities accordingly. No interference with channel traffic or operations shall be allowed.

3.2.2.2 Compensation for Interruption of Operations

If dredging operations are interrupted due to the movement of vessels or floating equipment, an adjustment in the contract price or time for completion, or both, will be made as provided by the contract. The Contracting Officer will notify the Contractor 7 days prior to ship movements that will affect dredging operations.

3.2.3 Lights

Each night, between sunset and sunrise and during periods of restricted visibility, provide lights for floating plants, pipelines, ranges, and markers. Also, provide lights for buoys that could endanger or obstruct navigation. When night work is in progress, maintain lights from sunset to sunrise for the observation of dredging operations. Lighting shall conform to United States Coast Guard requirements for visibility and color.

3.2.4 Ranges, Gages, and Lines

Furnish, set, and maintain ranges, buoys, and markers needed to define the work and to facilitate inspection. Establish and maintain gages in locations observable from each part of the work so that the depth may be determined. Suspend dredging when the gages or ranges cannot be seen or followed. The Contracting Officer will furnish, upon request by the Contractor, survey lines, points, and elevations necessary for the setting of ranges, gages, and buoys.

3.2.5 Plant

Maintain the plant, scows, coamings, barges and associated equipment to meet the requirements of the work. Remove dredged material placed due to leaks and breaks.

3.2.6 Disposal of Excavated Material

Contaminated Dredge Spoils - Special Note:

The Navy has conducted sampling to determine the characteristics of the dredge spoils for disposal. All spoils are non-hazardous. During the characterization sampling event, a discrete layer of petroleum contamination was noted; this layer of contamination varies in depth and thickness in the proposed dredge area. Copies of waste manifests will be maintained and will be included in the Completion Report. A copy of the Sediment Sampling and Testing Report is attached in Appendix "C".

The contractor shall provide for safe transportation and disposal of dredged materials. Transport and dispose of dredged material in the selected disposal location in accordance with the permits and upland disposal site regulations. The deposit of dredged materials in unauthorized places is forbidden. Comply with rules and regulations of local port and harbor governing authorities.

3.2.6.1 Method of Disposal

Despose of dredged material from dredge areas as specified in the Dredge Material Management Plan. Notify the Contracting Officer when scows or barges are returned to the dredge area.

3.2.6.2 Scow Dewatering Procedures

Scow dewatering shall be in accordance with the Dredge Material Management Plan.

3.2.7 Navigation Warnings

Furnish and maintain navigation warning signs along the pipeline.

3.2.8 Method of Communication

Provide a system of communication between the dredge crew and the crew at the disposal area. A portable two-way radio is acceptable.

3.2.9 Salvaged Material

Anchors, chains, firearms, and other articles of value, which are brought to the surface during dredging operations, shall remain or become the property of the Government and shall be deposited on shore at a convenient location near the site of the work, as directed.

3.2.10 Safety of Structures

The prosecution of work shall ensure the stability of piers, bulkheads, and other structures lying on or adjacent to the site of the work, insofar as structures may be jeopardized by dredging operations. Repair damage resulting from dredging operations, insofar as such damage may be caused by variation in locations or depth of dredging, or both, from that indicated or permitted under the contract.

3.2.11 Plant Removal

Upon completion of the work, promptly remove plant, including ranges, buoys, piles, and other markers or obstructions.

3.3 MEASUREMENT

The Government will record soundings within 30 days before dredging work has commenced and within 30 days of completion of dredging.

3.3.1 Method of Measurement

The material removed will be measured by cubic yard in place, by means of soundings taken before and after dredging. The drawings represent existing conditions based on current available information, but will be verified and corrected, if necessary, by soundings taken before dredging in each locality. Soundings will be taken by Single Beam Sonar (200 kHz) or via Multi-Beam Sonar methods, or both, as determined by the Government. Results of soundings recorded by government determined methods will be the basis for payment. Areas sounded more than 30 days prior to dredging will be re-sounded when requested by the Contractor. The Contractor has the option of being present when such soundings are made.

Multi-Beam survey field work shall be conducted using a RESON 7100 or 7125 Multi-Beam Sonar system and HYPACK/HYSWEEP software. Sounding information will be recorded using HYPACK/HYSWEEP Survey and processed using HYPACK/HYSWEEP Editor, generating TIN model surfaces as follows.

Cell Size: 5' x 5'
Sounding Position: Center of Cell
Cell Statistics: Average

All volume calculations will be determined via TIN to Advanced Channel Plan methodology using HYPACK MAX.

3.3.2 Surveys During Progress of Work

Contract depth will be determined by soundings or sweepings taken behind the dredge as work progresses. The Contractor shall take progress soundings or sweepings. Contractor shall keep a record of all dredged volumes from soundings and sweepings. Final payment will be based upon government pre and post dredge surveys.

3.3.3 Sampling

Sampling rates are based on disposal site mandated requirements for mechanically dredged materials. Most sites require either 1 sample per 100 CY of dredged material or 1 sample per 1,000 tons of dredged material. Reduced sampling frequency rates may be negotiated based on disposal site and Virginia Department of Environmental Quality (VDEQ) approval.

3.3.4 Monthly Estimates

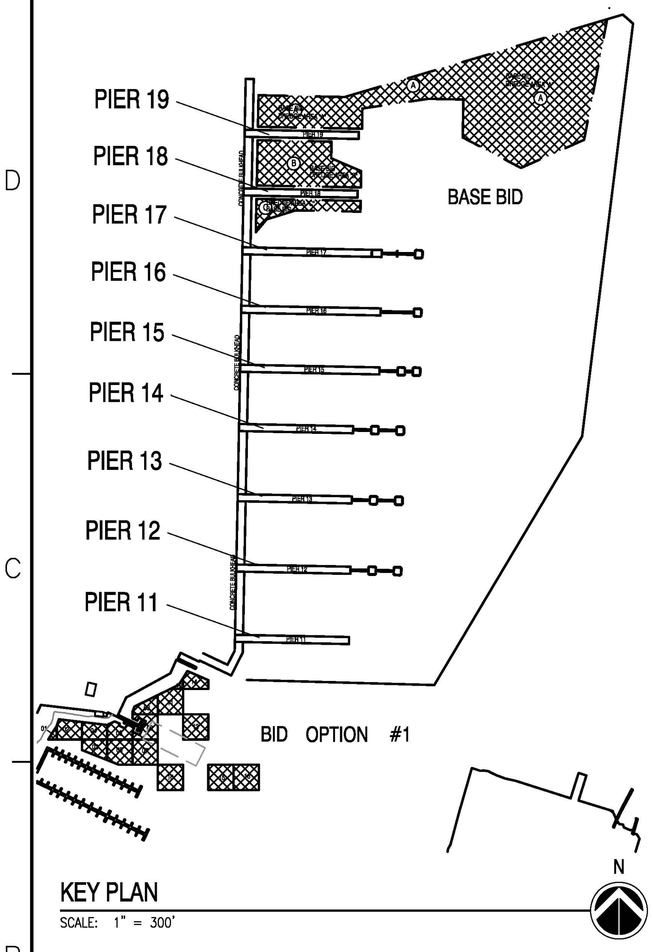
Monthly estimates of work completed will be based on the result of soundings taken during the progress of the work. Deductions will be made for dredging and disposal not in accordance with the specifications.

3.4 FINAL EXAMINATION AND ACCEPTANCE

As soon as practicable after the completion of areas, which in the opinion of the Contracting Officer, will not be affected by further dredging operations, each area will be examined by the Government by sounding or sweeping, or both. Remove shoals and lumps by dragging the bottom or by dredging. However, if the bottom is soft and the shoal areas form no material obstruction to navigation, removal may be waived at the discretion of the Contracting Officer. The Contractor will be notified when soundings or sweepings are to be made and will be permitted to accompany the sounding or sweeping party and to inspect the data and methods used in preparing the final estimate. When areas are found to be in a satisfactory condition, the work therein will be accepted as complete. Final estimates will be subject to deductions or correction of deductions previously made because of excessive overdepth, dredging outside or authorized areas, or disposal of material in an unauthorized manner.

-- End of Section --

FY 2012 MAINTENANCE DREDGING
JOINT EXPEDITIONARY BASE LITTLE CREEK - TEEN PIERS
VIRGINIA BEACH, VIRGINIA

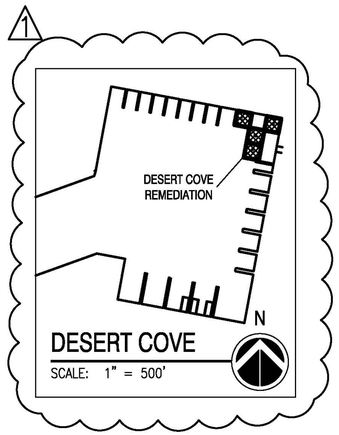


KEY PLAN

SCALE: 1" = 300'

PROPOSED DREDGE AREAS

(A) BASE BID DREDGE AREA ID



DESERT COVE

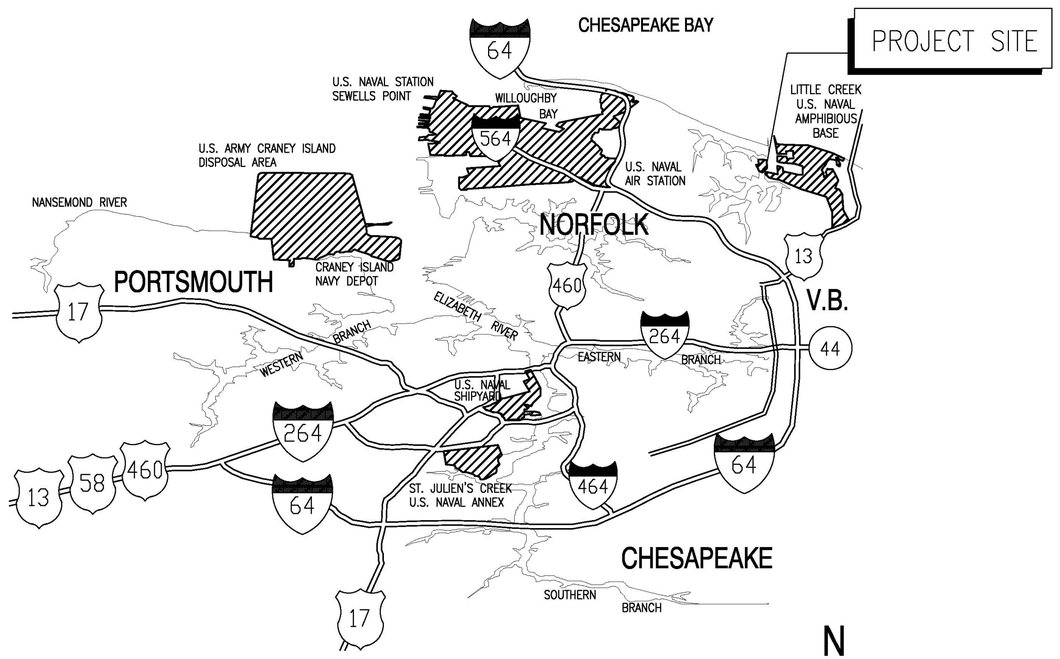
SCALE: 1" = 500'

HYDROGRAPHIC NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE NOAA MEAN LOWER LOW WATER VERTICAL DATUM.
2. THE HYDROGRAPHIC SURVEY WAS CONDUCTED USING CLASS 1 HYDROGRAPHIC SURVEY METHODS AND ACCURACIES OUTLINED IN THE CORPS OF ENGINEERS' HYDROGRAPHIC SURVEYING MANUAL (EM 1110-2-1003).
3. ALL SOUNDINGS WERE RECORDED USING A RESON 7101 OR 7125 MULTI-BEAM SONAR SYSTEM WITH HORIZONTAL POSITIONS OBTAINED VIA APPLANIX POS/MV GPS W/MRU.
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
5. SOUNDINGS SHOWN ON SHEETS V-101 AND V-102 WERE SURVEYED ON MARCH 1, 2011.

LIST OF SHEETS

#	SHEET NO.	SHEET TITLE/SURVEY AREA
1	V-001	TITLE SHEET AND PLAN VIEWS
2	V-002	DREDGE VOLUMES AND CROSS SECTIONS
3	V-101	BATHYMETRY: PIERS 18 AND 19 AND APPROACHES
4	V-102	MARINA/DRY DOCK AREA (BID OPTION #1) 1
5	V-103	REMEDIATION DREDGING IN DESERT COVE
6	V-201	DREDGE LIMITS: PIERS 18 AND 19 AND APPROACHES
7	V-301	DREDGED MATERIAL MANAGEMENT NARRATIVE



LOCATION PLAN

NOT TO SCALE

#	DESCRIPTION	DATE	APPR
1	Desert Cove key plan added, Sheet V-103 added	12/6/12	J.S.G

AE LOGO

APPROVED
JAMES S. GEORGO, PE
FOR COMMANDER NAVFAC DATE

APPROVED
CDR MIKE BRADY
ACTMTY - SATISFACTORY TO DATE

PROJECT MGR SIGNAL
DES: DSW DRW DSW CHK JSG
FIRE PROTECTION N/A
BRANCH MANAGER J. S. GEORGO, PE
CHIEF ENG/ARCH JOE FORMATO, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA
CAPITAL IMPROVEMENTS CORE
JOINT EXPEDITIONARY BASE, LITTLE CREEK VIRGINIA BEACH, VA
FY 2012 MAINTENANCE DREDGING
JEB LITTLE CREEK - TEEN PIERS
TITLE SHEET AND PLAN VIEWS

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO.
JOB ORDER NO.
WORK ORDER NO. 1128364
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12619966
SHEET 1 OF 7
V-001

DRAWFORM REVISION: 2 FEB 2011

DREDGE AREA ID (SEE KEY PLAN SHEET V-001)	SHEET	PIER AND/OR APPROACHES	AREA (SY)	CONTRACT DEPTH (FT) (MLLW)	OVER DREDGE DEPTH (FT) (MLLW)	ESTIMATED VOLUME AVAILABLE WITHIN REQUIRED DREDGE AREA (CY)	
BASE BID: FY-2012 LITTLE CREEK TEEN PIERS MAINTENANCE DREDGE						**CONTRACT DEPTH**	**OVERDREDGE DEPTH**
A	V-101	PIER 19 (NORTH) AND APPROACH	34,773	-23	-24	18,312	12,483
B	V-101	PIER 19 (SOUTH) AND PIER 18 (NORTH)	7,020	-23	-24	10,230	2,736
C	V-101	PIER 18 (SOUTH)	2,492	-23	-24	1,516	1,109
					BASE BID SUBTOTAL:	**30,058**	**16,328**

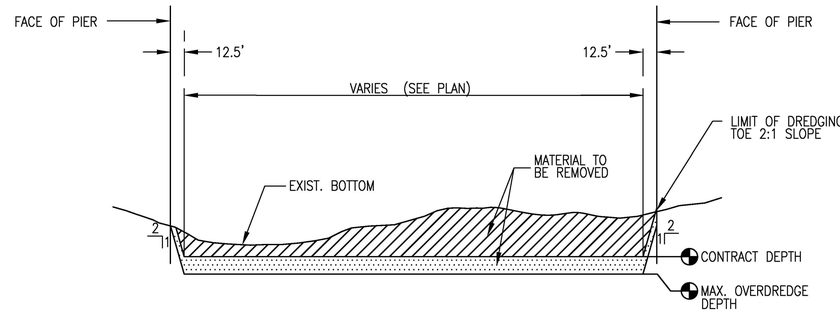
DREDGE AREA ID (SEE KEY PLAN SHEET V-001)	SHEET	PIER AND/OR APPROACHES	AREA (SF)	CONTRACT DEPTH (FT) (MLLW)	OVER DREDGE DEPTH (FT) (MLLW)	ESTIMATED VOLUME AVAILABLE WITHIN REQUIRED DREDGE AREA (CY)	
BID OPTION #1: FY-2012 LITTLE CREEK MARINA & DRY DOCK AREA MAINTENANCE DREDGE						**CONTRACT DEPTH**	**OVERDREDGE DEPTH**
1	V-101	CELL 1	905	-5.0	-6.0	67	34
2	V-102	CELL 2	7,387	-5.2	-6.2	547	274
3	V-102	CELL 3	6,174	-7.3	-8.3	457	229
4	V-102	CELL 4	6,329	-5.6	-6.6	469	234
5	V-102	CELL 5	9,575	-11.7	-12.7	709	355
6	V-102	CELL 6	5,926	-8.5	-9.5	439	219
7	V-102	CELL 7	10,000	-14.3	-15.3	741	370
8	V-102	CELL 8	7,694	-18.9	-19.9	570	285
9	V-102	CELL 9	5,049	-14.5	-15.5	374	187
10	V-102	CELL 10	10,000	-17.3	-18.3	741	370
11	V-102	CELL 11	9,386	-15.5	-16.5	695	348
12	V-102	CELL 12	764	-16.2	-17.2	57	28
13	V-102	CELL 13	10,000	-22.2	-23.2	741	370
14	V-102	CELL 14	5,359	-16.7	-17.7	397	198
15	V-102	CELL 15	10,000	-18.2	-19.2	741	370
16	V-102	CELL 16	10,000	-18.2	-19.2	741	370
					BID OPTION #1 SUBTOTAL:	**8,485**	**4,243**

DREDGE AREA ID (SEE KEY PLAN SHEET V-001)	SHEET	PIER AND/OR APPROACHES	AREA (SF)	CONTRACT DEPTH (FT) (MLLW)	OVER DREDGE DEPTH (FT) (MLLW)	ESTIMATED VOLUME AVAILABLE WITHIN REQUIRED DREDGE AREA (CY)	
REMEDIATION DREDGING IN DESERT COVE						**CONTRACT DEPTH**	**OVERDREDGE DEPTH**
17	V-103	CELL 17	9,500	-13.5	-14.5	704	352
18	V-103	CELL 18	9,025	-13.3	-14.3	669	334
19	V-103	CELL 19	10,000	-14.3	-15.3	741	370
20	V-103	CELL 20	10,000	-13.7	-14.7	741	370
					REMEDIATION DREDGING IN DESERT COVE SUBTOTAL:	**2,854**	**1,426**

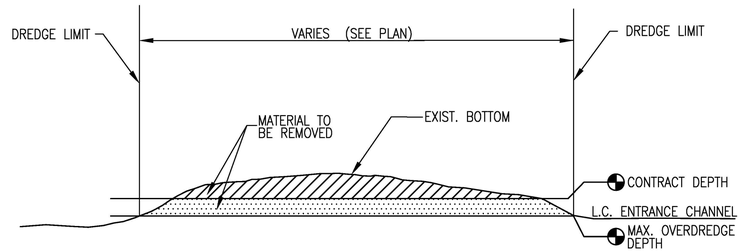
GENERAL NOTES FOR TABLE:

1. QUANTITIES INCLUDE MATERIAL IN PRISMS TO FORM SLOPES.
2. PROJECTED 0.028 FT/MONTH SILTATION RATE APPLIED TO MAR 2011 SOUNDINGS TO ESTIMATE ALL VOLUMES FOR SEPTEMBER 2012 DREDGE OPERATION.
3. FINAL CONTRACT AND OVERDREDGE DEPTHS AND MATERIAL VOLUMES SHALL BE DETERMINED BASED UPON THE PRE-DREDGE BATHYMETRIC SURVEY TO BE PERFORMED BY THE GOVERNMENT. CONTRACTOR SHALL NOT PROCEED WITH DREDGING UNTIL THE PRE-DREDGE SURVEY HAS BEEN COMPLETED, FINAL DREDGE DEPTHS HAVE BEEN DETERMINED AND INFORMATION HAS BEEN FURNISHED TO THE CONTRACTOR.

1



A–A TYPICAL TRANSVERSE SECTION THRU SLIPS
NOT TO SCALE



B–B TYPICAL LONGITUDINAL SECTION THRU APPROACH
NOT TO SCALE

NO	DESCRIPTION	DATE	APPR
1	Volume table updated to include Desert Cove	12/6/12	J.S.G

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CAPITAL IMPROVEMENTS CORE
JOINT EXPEDITIONARY BASE, LITTLE CREEK
NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA
VIRGINIA BEACH, VA

FY 2012 MAINTENANCE DREDGING
JEB LITTLE CREEK - TEEN PIERS

DREDGE VOLUMES AND CROSS SECTIONS

AE LOGO

APPROVED
JAMES S. GEORGO, PE
FOR COMMANDER NAVFAC
DATE

APPROVED
CDR MIKE BRADY
ACTIVITY – SATISFACTORY TO
DATE

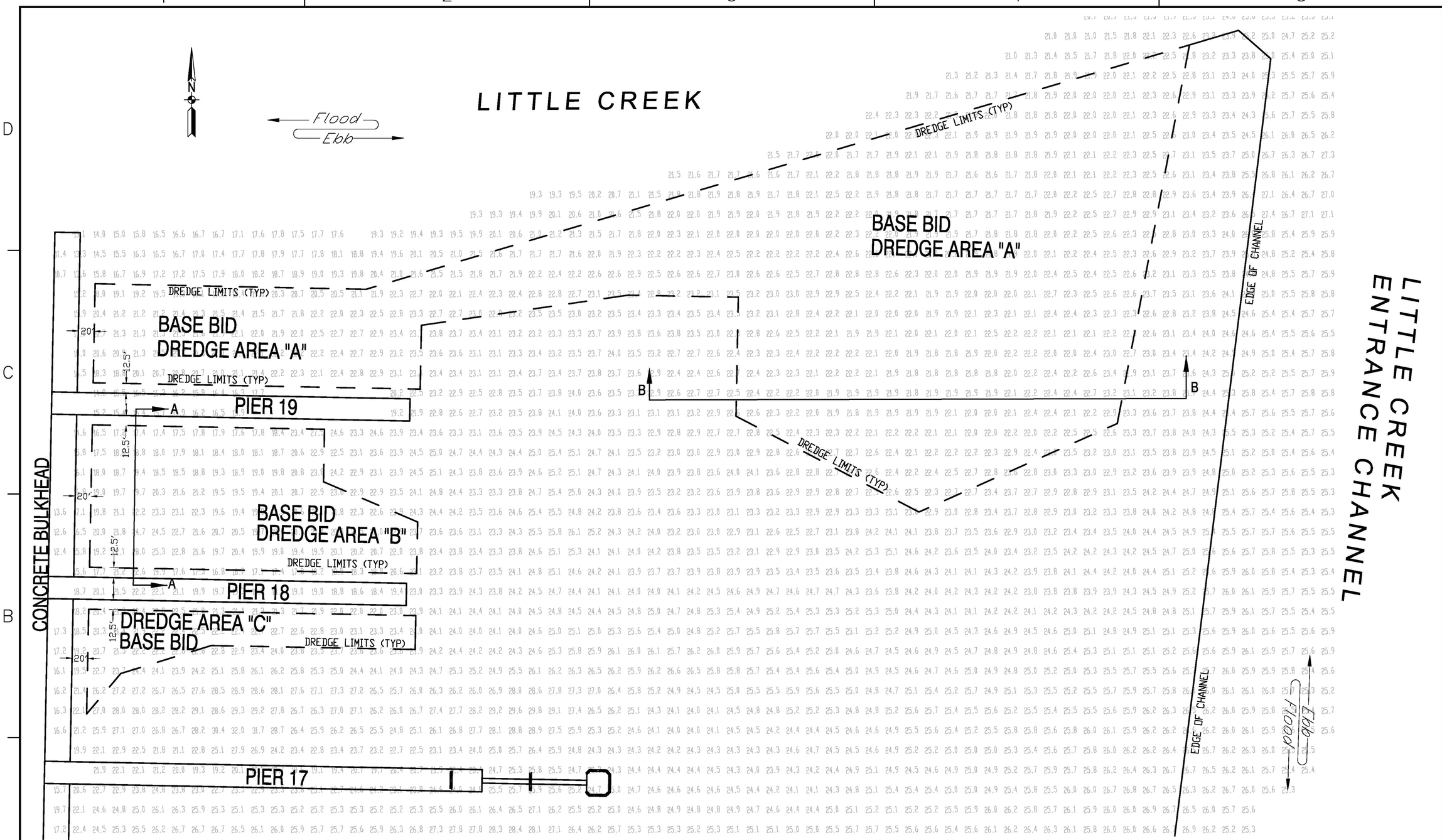
PROJECT MGR
SEAL

DES DSW DRW DSW CHK JSG
FIRE PROTECTION N/A
BRANCH MANAGER J. S. GEORGO, PE
CHIEF ENG/ARCH JOE FORMATO, P.E.

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO.
JOB ORDER NO.
WORK ORDER NO. 1128364
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12619967
SHEET 2 OF 7
V-002

DRAWFORM REVISION: 2 FEB 2011

FILE NAME: D:\Documents and Settings\dane.wray\My Documents\WORK\LITTLE CREEK\JEBLCFS LITTLE CREEK FY12 MAINT DRDG\Adding Desert Cove\DoneCopy_JEBLCFS_Teen Piers_FY12MaintDredge_FINAL.dwg LAYOUT NAME: V-002 PLOTTED: Thursday, January 10, 2013 - 3:54pm USER: dane.wray



APPROXIMATE REQUIRED DREDGE AREA SHOWN. ACTUAL DREDGE LIMITS SHALL BE DETERMINED BY PRE-DREDGE SURVEY, PERFORMED BY THE GOVERNMENT, AND WILL BE BASED CLOSELY ON THE -22FT CONTOUR AT THE TIME OF SURVEY.

James S. Georgo, P.E.

SURVEY DATE	SYMBOLS	GRAPHIC SCALE
03/01/2011	DREDGE LIMITS	1" = 60'-0" 0 30' 60' 120'

APPR | DATE | DESCRIPTION | NUM

NAVFAC

AE LOGO

APPROVED
JAMES S. GEORGO, PE
FOR COMMANDER NAVFAC DATE

APPROVED
CDR MIKE BRADY
ACTMTY – SATISFACTORY TO DATE

PROJECT MGR | SEAL
DES: DSW | DRW: DSW | CHK: JSG
FIRE PROTECTION: N/A
BRANCH MANAGER: J. S. GEORGO, PE
CHIEF ENG/ARCH: JOE FORMATO, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CAPITAL IMPROVEMENTS CORE
NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA
JOINT EXPEDITIONARY BASE, LITTLE CREEK VIRGINIA BEACH, VA

FY 2012 MAINTENANCE DREDGING
JEB LITTLE CREEK - TEEN PIERS

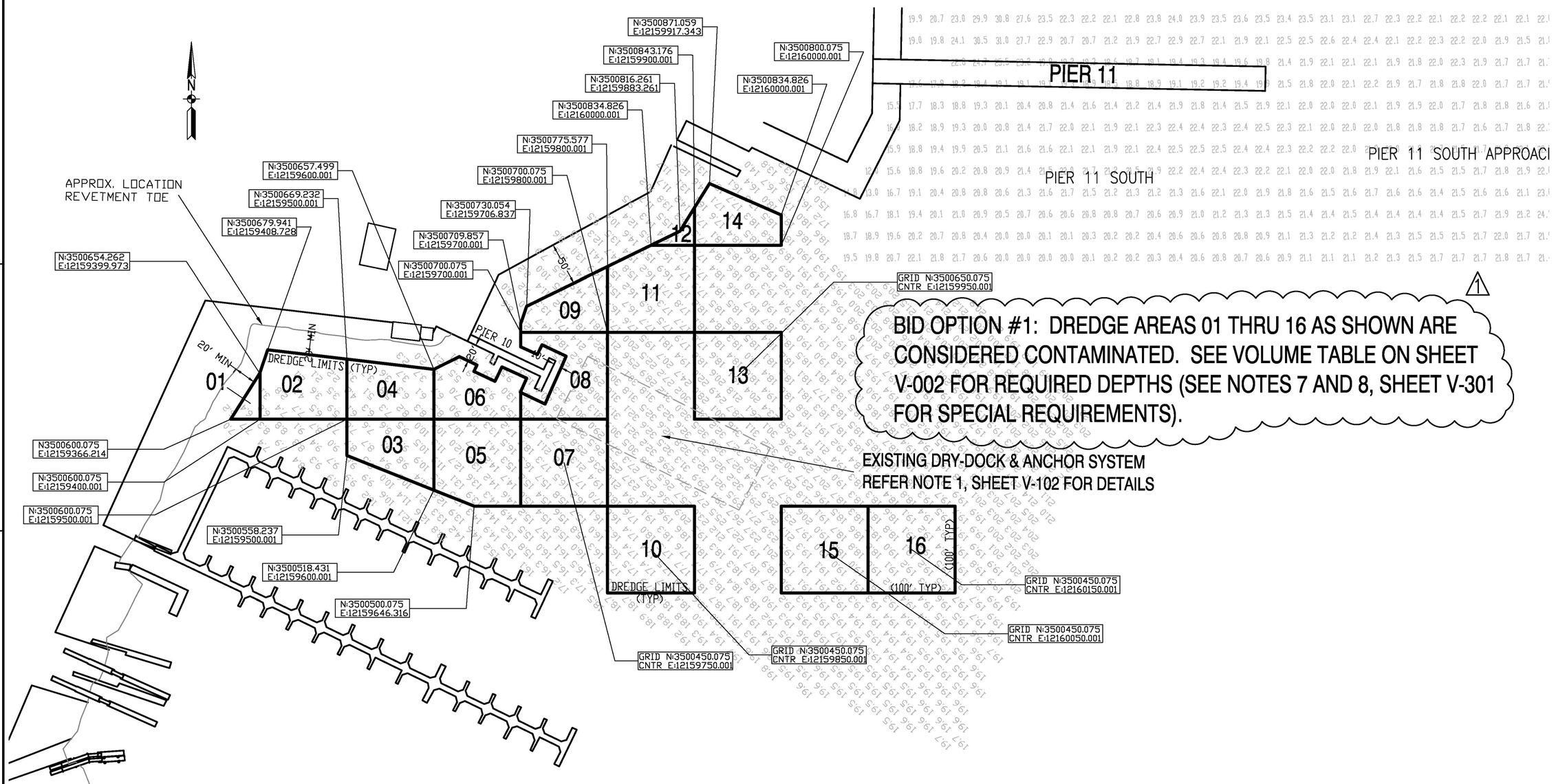
BATHYMETRY: PIERS 18 AND 19 AND APPROACHES

CODE ID. NO. 80091 | SIZE D
SCALE: AS NOTED
MAXIMO NO.
JOB ORDER NO.
WORK ORDER NO. 1128364
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12619968
SHEET 3 OF 7

V-101

DRAWFORM REVISION: 2 FEB 2011

FILE NAME: D:\Documents and Settings\dsnw.wroy\My Documents\MYDRO\LITTLE CREEK\JEBLCFS LITTLE CREEK FY12 MAINT DRDG\Editing Desert Cove\DsnwCopy_JEBLCFS_Teen Piers_FY12MaintDredge_FINAL.dwg LAYOUT NAME: V-101 PLOTTED: Thursday, January 10, 2013 - 3:55pm USER: dsnw.wroy



1

BID OPTION #1: DREDGE AREAS 01 THRU 16 AS SHOWN ARE CONSIDERED CONTAMINATED. SEE VOLUME TABLE ON SHEET V-002 FOR REQUIRED DEPTHS (SEE NOTES 7 AND 8, SHEET V-301 FOR SPECIAL REQUIREMENTS).

NOTES:

1. EXISITNG DRY-DOCK & ANCHOR SYSTEM SHALL BE REMOVED BY THE GOVERNMENT PRIOR TO BID OPTION #1 DREDGING COMMENCEMENT.
2. MAINTAIN 10' DREDGE LIMIT OFFSET AROUND PIER 10 STRUCTURE.
3. FINAL CONTRACT AND OVERDREDGE DEPTHS AND MATERIAL VOLUMES SHALL BE DETERMINED BASED UPON THE PRE-DREDGE BATHYMETRIC SURVEY TO BE PERFORMED BY THE GOVERNMENT. CONTRACTOR SHALL NOT PROCEED WITH DREDGING UNTIL THE PRE-DREDGE SURVEY HAS BEEN COMPLETED, FINAL DREDGE DEPTHS HAVE BEEN DETERMINED AND INFORMATION HAS BEEN FURNISHED TO THE CONTRACTOR.

James S. Georgo, P.E.

SURVEY DATE	GRAPHIC SCALE
03/01/2011	1" = 60'-0" (0 30' 60' 120')

NO.	DESCRIPTION	DATE	APPR
1	Note Revised	12/6/12	J.S.G

NAVFAC

AE LOGO

APPROVED
JAMES S. GEORGO, PE
FOR COMMANDER NAVFAC DATE

APPROVED
CDR MIKE BRADY
ACTMTY - SATISFACTORY TO DATE

PROJECT MGR SEAL
DES DSW DRW DSW CHK JSG
FIRE PROTECTION N/A
BRANCH MANAGER J. S. GEORGO, PE
CHIEF ENG/ARCH JOE FORMATO, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CAPITAL IMPROVEMENTS CORE
JOINT EXPEDITIONARY BASE, LITTLE CREEK
NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA
VIRGINIA BEACH, VA

FY 2012 MAINTENANCE DREDGING
JEB LITTLE CREEK - TEEN PIERS

MARINA/DRY DOCK AREA (BID OPTION #1)

CODE ID. NO. 80091 | SIZE D
SCALE: AS NOTED
MAXIMO NO.
JOB ORDER NO.
WORK ORDER NO. 1128364
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12619969
SHEET 4 OF 7

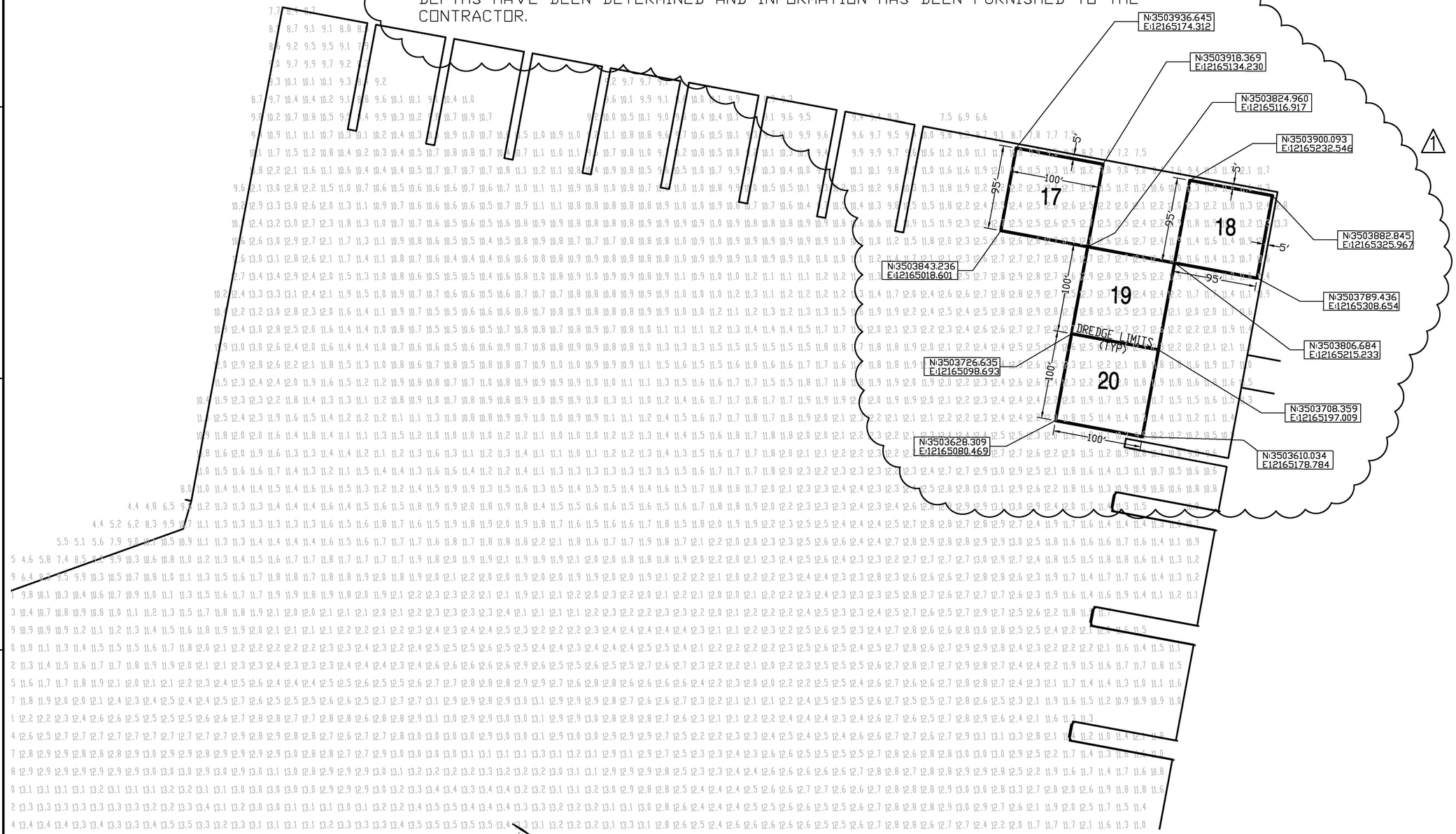
V-102

DRAWFORM REVISION: 2 FEB 2011

FILE NAME: D:\Documents and Settings\dane.wroy\My Documents\MYWORK\LITTLE CREEK\JEBLCFS_FY12 MAINT DRDG\Adding Desert Cove\DuneEdspy_JEBLCFS_Teen Piers_FY12MaintDredge_FINAL.dwg

NOTE:

1. DREDGE AREAS 17, 18, 19 AND 20 ARE CONSIDERED TO BE CONTAMINATED. SEE NOTES 7 AND 8, SHEET V-301 FOR SPECIAL REQUIREMENTS.
2. SEE TABLE ON SHEET V-002 FOR REQUIRED DEPTHS AND ESTIMATED VOLUMES
3. FINAL CONTRACT AND OVERDREDGE DEPTHS AND MATERIAL VOLUMES SHALL BE DETERMINED BASED UPON THE PRE-DREDGE BATHYMETRIC SURVEY TO BE PERFORMED BY THE GOVERNMENT. CONTRACTOR SHALL NOT PROCEED WITH DREDGING UNTIL THE PRE-DREDGE SURVEY HAS BEEN COMPLETED, FINAL DREDGE DEPTHS HAVE BEEN DETERMINED AND INFORMATION HAS BEEN FURNISHED TO THE CONTRACTOR.



James S. George, P.E.

SURVEY DATE	GRAPHIC SCALE
03/29/2011	1" = 60'-0" 0 30' 60' 120'

NO.	DESCRIPTION	DATE	APPR
1	Desert Cove Dredging Area and Note Added	12/6/12	J.S.G

NAVFAC

AE LOGO

APPROVED
JAMES S. GEORGO, PE
FOR COMMANDER NAVFAC
DATE

APPROVED
CDR MIKE BRADY
ACTMTY – SATISFACTORY TO
DATE

PROJECT MGR SIGN

DES DSW DRW DSW CHK JSG

FIRE PROTECTION N/A

BRANCH MANAGER J. S. GEORGO, PE

CHIEF ENG/ARCH JOE FORMATO, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC
CAPITAL IMPROVEMENTS CORE
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL STATION - NORFOLK, VIRGINIA
JOINT EXPEDITIONARY BASE, LITTLE CREEK VIRGINIA BEACH, VA

FY 2012 MAINTENANCE DREDGING
JEB LITTLE CREEK - TEEN PIERS

REMEDIATION DREDGING IN DESERT COVE

CODE ID. NO. 80091 SIZE D

SCALE: AS NOTED

MAXIMO NO.

JOB ORDER NO.

WORK ORDER NO. 1128364

CONSTR. CONTR. NO. N/A

NAVFAC DRAWING NO. 12619970

SHEET 5 OF 7

V-103

DRAWFORM REVISION: 2 FEB 2011

FILE NAME: D:\Documents and Settings\vlorie.wray\My Documents\MYDRO\LITTLE CREEK\JEBLCFS_LITTLE CREEK FY12 MAINT DRDG\Adding Desert Cove\James\Copy_JEBLCFS_Teen Piers_FY12Mcin\Dredge_FINAL.dwg LAYOUT NAME: V-103 PLOTTED: Thursday, January 10, 2013 - 3:55pm USER: dorie.wray

LITTLE CREEK

Flood
Ebb

GRID N:3503148.548
GRID E:12160198.764

GRID N:3503141.506
GRID E:12160540.335

GRID N:3503095.261
GRID E:12160610.319

1

GRID N:3503449.347
GRID E:12161579.186

DREDGE LIMITS (TYP)

GRID N:3503023.605
GRID E:12160196.360

DREDGE LIMITS (TYP)

BASE BID
DREDGE AREA "A"

20'

12.5'

DREDGE LIMITS (TYP)

GRID N:3503134.194
GRID E:12160871.124

GRID N:3503131.519
GRID E:12161010.098

PIER 19

GRID N:3503015.667
GRID E:12160608.787

GRID N:3502964.980
GRID E:12160488.116

GRID N:3502981.547
GRID E:12161007.211

DREDGE LIMITS (TYP)

EDGE OF CHANNEL

GRID N:3502972.291
GRID E:12161488.122

CONCRETE BULKHEAD

12.5'

GRID N:3502970.614
GRID E:12160195.340

20'

GRID N:3502898.800
GRID E:12160486.842

GRID N:3502791.341
GRID E:12160191.891

BASE BID
DREDGE AREA "B"

GRID N:3502848.152
GRID E:12160605.564

12.5'

DREDGE LIMITS (TYP)

GRID N:3502783.403
GRID E:12160604.318

PIER 18

GRID N:3502730.412
GRID E:12160603.298

12.5'

DREDGE AREA "C"
BASE BID

DREDGE LIMITS (TYP)

20'

GRID N:3502692.639
GRID E:12160345.268

GRID N:3502687.686
GRID E:12160602.476

GRID N:3502738.354
GRID E:12160190.643

GRID N:3502657.316
GRID E:12160231.069

PIER 17

GRID N:3502606.372
GRID E:12160188.030

GRID N:3502860.709
GRID E:12161237.929

EDGE OF CHANNEL

LITTLE CREEK ENTRANCE CHANNEL

Flood
Ebb

APPROXIMATE REQUIRED DREDGE AREA SHOWN. ACTUAL DREDGE LIMITS SHALL BE DETERMINED BY PRE-DREDGE SURVEY, PERFORMED BY THE GOVERNMENT, AND WILL BE FIXED CLOSELY ON THE -22FT CONTOUR AT THE TIME OF SURVEY.

SYMBOLS	GRAPHIC SCALE
DREDGE LIMITS	1" = 60'-0" 0 30' 60' 120'

NO.	DESCRIPTION	DATE	APPR
1	Dredge Area A Updated per Pre-Dredge Survey	12/27/12	J.S.G

NAVFAC

AE LOGO

APPROVED
JAMES S. GEORGO, PE
FOR COMMANDER NAVFAC
DATE

APPROVED
CDR MIKE BRADY
ACTMTY - SATISFACTORY TO
DATE

PROJECT MGR
SEAL

DES DSW DRW DSW CHK JSG

FIRE PROTECTION N/A

BRANCH MANAGER J. S. GEORGO, PE

CHIEF ENG/ARCH JOE FORMATO, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CAPITAL IMPROVEMENTS CORE
NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC
NAVAL STATION ~ NORFOLK, VIRGINIA
JOINT EXPEDITIONARY BASE, LITTLE CREEK VIRGINIA BEACH, VA
FY 2012 MAINTENANCE DREDGING
JEB LITTLE CREEK - TEEN PIERS
DREDGE LIMITS: PIERS 18 AND 19 AND APPROACHES

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO.
JOB ORDER NO.
WORK ORDER NO. 1128364
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12619971
SHEET 6 OF 7

V-201

DRAWFORM REVISION: 2 FEB 2011

FILE NAME: D:\Documents and Settings\vbrre.wroy\My Documents\MYDWG\LITTLE CREEK\JEBLCFS_LITTLE CREEK FY12 MAINT DRDG\Visiting Desert Cove\DesertCopy_JEBLCFS_Teen Piers_FY12MaintDredge_FINAL.dwg LAYOUT NAME: V-201 PLOTTED: Thursday, January 10, 2013 - 3:55pm USER: dbrre.wroy

DREDGED MATERIAL MANAGEMENT NARRATIVE

1. To reach the depths of dredging required and to control re-suspension, a sealed bucket dredge will be used. Dredged materials will be placed in a scow for subsequent handling as discussed in Sections 4.0 through 6.0. An enclosed bucket will be specified having a watertight seal when the bucket is closed. The size of the bucket may vary based on equipment available to the contractor and the planned production rates, but in all cases the bucket will be required to contain the dredged material and associated river water to the maximum extent practical as the bucket is raised from the dredge cut and swung to the disposal scow.

2. The dredge will be equipped with Differential Global Positioning System (DGPS) positioning system providing sub-meter positioning accuracy or similar equipment so that the location of each bucket can be accurately determined to ensure all material within each dredge area is removed. The depth of each cut will also be accurately determined to ensure that removal extends to, at a minimum, the required contract depths.

3. Dredged material will be placed in water-tight scows for eventual transport away from the dredging site. The dredge bucket will be placed fully over the scow and lowered toward the scow to ensure the material is placed into the scow with minimal splashing. Sea water and dredged material in the dredge bucket will be placed in the scow. When the water level within the scow approaches within one foot of the top of the contained area within the scow, material placement into the scow will cease. In no case will any overflow of water from the scow be allowed. Scow drainage scuppers, if any, will be sealed or material placement will cease when water levels rise to within a foot of the drainage scuppers. Dredging rates will be moderated to reduce spillage and splashing as the dredge bucket is raised in and out of the water, swung to and from the scow, and as material is placed into the scow. Additional measures will also be taken to contain any turbidity associated with the mechanical dredging. A silt curtain(s) will be deployed around the dredging operation, including the scow receiving the dredged material. The turbidity curtain will be a Type 2 per the VESH Std 3.27. Depth shall be at least 5' and shall not exceed 10'. An oil absorbent boom(s) will also be deployed around the dredging operation within the confines of the turbidity curtain. During dredging operations, the silt curtain and oil boom will be closed. When scows are moved in or out of the contained area, dredging will cease prior to opening of the silt curtain. Dredging will not resume until all movements into or out of the dredging area have been completed and the curtain has been closed and secured.

4. SCOW DEWATERING PROCEDURES

Once a scow has been filled, it would be moved away from the dredge and replaced with an empty scow so that dredging could proceed. Depending on the extent of the silt curtain and absorbent boom, the filled scow may be left within the enclosed area. Alternately, it may be moved out of the dredging area by the support tug and secured in the general vicinity as directed by the contract officer. The filled scow will be allowed to remain in place for from 24 to 48 hours so that sediments suspended within the sea water during the dredging can settle to the bottom. At the end of the settlement period, the clear supernate water will be pumped overboard. The inlet to the pump will be adequately filtered at all times so that dredged material and turbid water are not drawn into the pump. As the water level is lowered, pumping will cease when the pump inlet can no longer be adequately isolated from the dredged material to ensure that only clear water will be discharged through the pump.

The sea water will be pumped overboard at a discharge point that is encircled by a floating silt curtain and an oil absorbent boom. The enclosed area may be the same one enclosing the dredging operations or may be another nearby enclosed and protected area. If turbid water or an oily sheen is observed in the discharge water, pumping will cease. The clear supernate water in the scow will also be inspected prior to discharge to determine if an oily sheen has developed on the surface. If an oily sheen is observed on the surface, than the pump inlet will be kept submerged throughout the discharge pumping. Pumping will cease before the surface layer can be discharged through the pump or filters will be placed on the pump inlet that prevent the oily sheen from being discharged.

Once the dewatering of the scow has been completed, the scow will be moved from the dredging area to the solidification and offloading location. Any residual water remaining in the scow following dewatering will be mixed with the sediments as the material is solidified and off loaded.

5. DREDGED MATERIAL SOLIDIFICATION

Solidification of the material to acceptable moisture levels that can pass the paint filter test will be accomplished by the addition of a drying/solidifying agent that will absorb the excess moisture. The contractor will use either lime or Portland cement for this project. The contractor may request alternate additives, including proprietary drying agents, by submitting a comprehensive plan that provides specifics on the effectiveness of the additive, the means of mixing and details on any potential impacts to cost and volume. This plan must be approved by the Navy and all applicable regulatory agencies prior to any approval to use the alternate additive.

James S. Georgo, P.E.

Mixing:

In-scow mixing will occur with the scow docked at the Port Weanack Facility as directed by the facility management. The mixing equipment will operate on the dock surface behind the bulkhead or via barge mounted equipment with the mixing apparatus reaching over and into the scow. Prior to any mixing, debris, if any, will be removed from the dredged material and placed in containers on the dockside for disposal. The lime or Portland cement will be delivered to the dockside where it will be mixed directly into the scows. Mixing within the scow will be accomplished by a rotary mixing head attached to an extended reach excavator or similar equipment. The lime or Portland cement will be injected into the wet dredged material by the mixing apparatus. Injection and initial mixing will occur within and below the surface of the dredged material to limit fugitive dust emissions. Following injection of the specified quantity of lime or Portland cement, mixing will continue until a relatively uniform blend has been achieved within the scow to ensure moisture content requirements are met.

Transferring the lime or Portland cement from the delivery trucks into the scows and complete mixing into the dredged material will be carried out in a manner that limits fugitive dust emissions to the maximum extent practical. Depending on the delivery; temporary storage, if required; transfer; and mixing equipment proposed by the contractor, an air permit may be required by VDEQ. The contractor will provide all needed details on the proposed delivery, temporary storage, transfer, and mixing equipment and procedures and will support the Navy while obtaining the temporary air permit, if required. The contractor may request to use alternate mixing procedures, including proprietary processes, by submitting a comprehensive plan that provides specifics on the effectiveness of the alternate mixing procedures, details on any potential impacts to cost and volume, and permitting requirements, if any. This plan must be approved by the Navy and all applicable regulatory agencies prior to any approval to use the alternate mixing procedures.

6. DREDGED MATERIAL LOADING AND TRANSPORTATION

Following solidification to lower the moisture content of the dredged material to levels acceptable for disposal or treatment, the dredged material will be loaded into trucks for transportation to the final disposal or treatment facility. Loading of the trucks will be directly from the scow. Contractor will prepare and submit to the government for approval plans and procedures to prevent spillage and to contain all dredged material within the confines of the transfer and loading area. Trucks will be inspected prior to leaving the loading area to ensure no spillage during travel to the final destination. Loads will be covered. If necessary, tire washes will be provided by the contractor to ensure no material is tracked away from the loading area. The contractor will be responsible for ensuring that legal weight limits are met. At the final disposal or treatment facility, the trucks will follow the facilities standard operating procedures as they unloaded the materials as directed by the facility.

Following solidification but prior to delivery to the disposal or treatment facility, analyses of the final blended material will be required to document that the material meets the acceptance criteria of the facility. The standard frequency for analysis is generally one set of analyses for every 100 cubic yards of material. Due to the large volumes of relatively uniform material that will be delivered to a facility, the facility and VDEQ may establish a less frequent testing requirement. While the testing requirement may be less than one test for every 100 cubic yards, testing prior to delivery will be required at some predetermined frequency. Consequently, it will be necessary to hold material until the analytical results have been received and the material has been cleared for acceptance at the facility.

7. SCOW DECONTAMINATION (BID OPTION #1 AND DESERT COVE MATERIAL ONLY)

Once the final load from each scow is loaded out, the scows will be decontaminated. Each scow will be tied off to the dock and sprayed down with a "fire nozzle" on a 2.5-inch trash pump attached to a 3,000 (or greater) gallon tank to wash the hold/cargo area. The tank will be located on/near the dock and filled with non-potable water. A field crew will use mops and squeegees to wash the plates, deck and hold.

Once the tank is empty, the trash pump will be used to remove the water from the barge placing the rinse water back in the tank. To capture sediment/silt, the discharge end of the hose will run through a silt bag suspended inside or just over the tank. The silt bag, once sufficiently filled, is replaced, removed and disposed of with the dredged material. The water can be recycled several times. Once all of the scows are decontaminated (or if the tank water is too silty or clouded to use for rinsing the scows) the water will be removed by a vacuum truck for appropriate treatment/disposal. The tank will have a manhole or hatch large enough to allow interior cleaning before it is demobilized from the site. Prior to transportation and disposal, the rinse water will be characterized for proper disposal at a Navy-approved offsite disposal facility.

8. SAND LAYER PLACEMENT (WITHIN BID OPTION # 1 DREDGE AREA AND DESERT COVE DREDGE AREA ONLY)

After dredging of sediments has been completed and is accepted by the government, a minimum, 6-inch thick layer of clean, medium grain sand will be placed uniformly over the dredged areas. In grids 6, 8, 9, 10, 11, 12, and 13 where the POL is exposed following dredging activities, a minimum, 24-inch thick layer of clean, medium grain sand will be placed uniformly. In Grids 17, 18, 19 and 20, a layer of clean, medium grain sand will be placed over the dredged areas to an elevation of -11ft MLLW and the thickness of the sand layer will vary for each grid. Government shall perform bathymetric surveys after sand layer placement to verify final depth. Horizontal distribution, as well as vertical/thickness of the sand layer in each grid will be verified by collecting sediment cores allowing for visual confirmation. Sand depths specified equal the minimum thickness required. Cores must fully penetrate through sand layer. Contractor shall perform 1 core per 2500 square feet of cell area and at least one core in areas less than 2500 square feet in area. Photos of each coring showing the thickness of the clean sand layer, labeled with each grid location shall be supplied to the government. Photos must include a dimensional reference such as a tape measure or ruler.

In order to facilitate accurate horizontal positioning, in accordance with the coordinates shown on the plan, the contractor shall utilize a Differential Global Positioning System (DGPS) for guidance in positioning the bucket. Vertical positioning of the bucket shall be guided by use of a depth gauge. Contractor shall submit to government for approval specifications of the DGPS and depth gauge equipment to be utilized prior to commencement of work.

Offsite clean sand material brought in for use as backfill shall be tested for the following analytical methods:

- VOCs (Target Compound List) - EPA SW-846 Method 8260B.
- SVOCs (Target Compound List) - EPA SW-846 Method 8270C.
- Pesticides (Target Compound List) - EPA SW-846 Method 8081.
- Polychlorinated Biphenyls (PCBs) - Aroclor list. EPA SW-846 Method 8082.
- Herbicides - EPA SW-846 Method 8151.
- Total Petroleum Hydrocarbons (TPH) - EPA 600/4-79/020 Method 418.1.
- Benzene, Toluene, Ethylbenzene, and Xylene (BETX) - EPA SW-846.3-3Method 5030/8020.
- Inorganics by EPA SW-846 Method 6010.

Copies of the analytical results for the imported material shall be provided to the Navy prior to the placement of the materials. The backfill analytical results will be nondetect or detected below the corresponding acceptable criteria, to be determined by NAVFAC Mid-Atlantic, in partnership with EPA and VDEQ.

Selected clean sand material will be in accordance with the American Society of Testing Materials (ASTM) C33 gradation for fine aggregates in addition to the more stringent specifications at the #200 sieve to 0-1% passing. The low percent fines will minimize suspended solid plumes during placement, as well as minimizing material loss during placement activities. The unified soil classification for ASTM C33 fine aggregate is "poorly graded sand." ASTM D2487 defines poorly graded sand as follows:

- Cu (Coefficient of Uniformity) < 6 (Cu = 2.29 to 3.6)
- Cc (Coefficient of Curvature) between 1 and 3 (Cc = 1.0 to 1.1)

Sand Specification (ASTM C33 fine aggregate)

Sieve Size	% Passing [1]
3/8 inches	100
#4	95 - 100
#8	80 - 100
#16	50 - 85
#30	25 - 60
#50	10 - 30
#100	2 - 10
#200	0 - 3

1. More stringent specification to 0 - 1% passing over #200 sieve.

SYM	DESCRIPTION	DATE	APPR
1	Notes Updated to Include Desert Cove	12/6/12	J.S.G

NAVFAC

AE LOGO

APPROVED JAMES S. GEORGO, PE FOR COMMANDER NAVFAC DATE

APPROVED CDR MIKE BRADY ACTIVITY - SATISFACTORY TO DATE

PROJECT MGR SEAL

DES DSW DRW DSW CHK JSG

FIRE PROTECTION N/A

BRANCH MANAGER J. S. GEORGO, PE

CHIEF ENG/ARCH JOE FORMATO, P.E.

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND ~ MID ATLANTIC

CAPITAL IMPROVEMENTS CORE NAVAL STATION - NORFOLK, VIRGINIA

JOINT EXPEDITIONARY BASE, LITTLE CREEK VIRGINIA BEACH, VA

FY 2012 MAINTENANCE DREDGING JEB LITTLE CREEK - TEEN PIERS

DREDGED MATERIAL MANAGEMENT NARRATIVES

CODE ID. NO. 80091 SIZE D

SCALE: AS NOTED

MAXIMO NO.

JOB ORDER NO.

WORK ORDER NO. 1128364

CONSTR. CONTR. NO. N/A

NAVFAC DRAWING NO. 12619972

SHEET 7 OF 7

V-301

DRAWFORM REVISION: 2 FEB 2011

Attachment B
SWMU 3 and SWMU 7b ARARs

TABLE B-1

Federal Chemical-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Media	Requirement	Prerequisite	Citation	Alternative	ARAR/TBC Determination	Comment
Project Remediation Goals						
Sediment	Guidance document regarding how to conduct a technically defensible ecological risk assessment	Assessment of potential ecological risks.	Interim Final Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (EPA, June 1997). Copper (inorganic/metal) CAS #7440-50-8, Lead (inorganic/metal) CAS #7439-92-1, Nickel (inorganic/metal) CAS #7440-02-0, Tin (inorganic/metal) CAS #7440-31-5, and Zinc (inorganic/metal) CAS #7440-66-6	2, 3, 4	TBC	The objective of the removal action at SWMU 3 is to reduce or eliminate risks to ecological receptors from copper, lead, nickel, tin, and zinc in sediment. Project remediation goals (PRGs) for each contaminant of concern (COC) are below: Copper - 232 mg/kg Lead - 107 mg/kg Nickel - 26.5 mg/kg Tin - 11.2 mg/kg Zinc - 410 mg/kg

TABLE B-2

Virginia Chemical-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Media	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Wastewater Treatment						
Surface Water	Contains minimum standards for surface water quality. No discharge to surface water may cause these criteria to be violated.	Applicable to any discharge of industrial wastewater to state waters.	9 VAC 25-260-140A, 9 VAC 25-260-140B only as it pertains to Copper (CAS #7440-50-8), Lead (CAS #7439-92-1), Nickel (CAS #7440-02-0), Zinc (CAS #7440-66-6)	2,3	Applicable	Alternatives 2 and 3 will include discharge of decant water to Little Creek Harbor. Based on this process, the sediment COCs with specific limits have criteria listed that will be controled as part of the discharge. Treatment of the decant water to concentrations that are below background is not required. However, once removed, contaminated sediment must be prevented from discharging back to Little Creek Harbor while dewatering occurs. Effluent sampling will not be required during discharge activities. Monitoring for visual changes in turbidity and sheen will be conducted.
			9 VAC 25-260-140A, 9 VAC 25-260-140B only as it pertains to Copper (CAS #7440-50-8), Lead (CAS #7439-92-1), Nickel (CAS #7440-02-0), Zinc (CAS #7440-66-6), pH, and Temperature	4	Applicable	Alternative 4 includes treatment of the dredge slurry by filtration and the addition of a cationic polymer. Based on that process, the COCs with specific limits, pH, temperature, and toxicity have criteria listed that will be controled as part of the discharge. There are no standards specified for Tin. The final set of standards that will need to be monitored will be set after the design of the treatment system is completed.

TABLE B-3

Federal Location-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Location	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Migratory Flyway						
Migratory bird area	Protects almost all species of native birds in the United States from unregulated taking.	Presence of migratory birds.	*Migratory Bird Treaty Act;* 16 USC 703	2, 3, 4	Applicable	SWMU 3 is located in the Atlantic Migratory Flyway. If migratory birds, or their nests or eggs, are identified at Site 3, operations will not destroy the birds, nests or eggs.
Coastal Zone						
Coastal zone or area that will affect the coastal zone	Federal activities must be consistent with, to the maximum extent practicable, State coastal zone management programs.Federal agencies must comply with the consistency requirements of 15 CFR § 930.	Actions that may affect identified coastal zone resources or uses	15 CFR 930.33(a)(1), (a)(2), (b); .35(a), (b); .36(a)	2, 3, 4	Applicable	Activities at SWMU 3 that will affect Virginia's coastal zone will be consistent to the maximum extent practicable with Virginia's enforceable policies. Activites performed on-site and in compliance with CERCLA are not subject to adminsitrative review; however the substantive requirements of making a consistency determination will be met.

TABLE B-4

Virginia Location-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Location	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Wetlands						
Wetlands	Mitigate or minimize the loss of wetlands and the adverse ecological effects of all permitted activities. To preserve the wetlands as much as possible in their natural state and to consider appropriate requirements for compensation only after it has been proven that the loss of the natural resource is unavoidable and that the project will have the highest public and private benefit. Commitments to preserve other existing wetlands shall not ordinarily be an acceptable form of compensation.	If a wetlands zoning ordinance has been adopted by local government, in accordance with the *General Provisions Relating to Marine Resources Commission*, and the response action is not exempt from its provisions, the project must comply with the requirements of the ordinance. In the case of absence of an ordinance, or of an exemption to it, VMRC can exercise jurisdiction over tidal wetlands.	4 VAC 20-390-40, 50	2, 3, 4	Relevant and Appropriate	It is not anticipated that onsite activities will disturb the existing wetland areas. The dredging operation will not result in a net loss of wetland area.
Presence of Threatened and Endangered Species or Habitat						
Area where endangered species are present	Identified federal and state threatened and endangered species are protected from unlawful taking. This requirement includes prohibition of activities that adversely affect critical habitat. The list of federal threatened and endangered species is incorporated into state law along with additions.	Activity in an area where listed threatened or endangered species are present or in an area that is designated as their critical habitat.	4VAC 15-20-130 (c), 2 VAC 5-320-10 (as it references §3.2-1003)	2, 3, 4	TBC	Per Navy policy, state-listed species are protected through the implementation of an Integrated Natural Resource Management Plan (INRMP). Compliance with the INRMP will constitute compliance with all substantive requirements in the regulations for this action.

TABLE B-5

Federal Action-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Dredge and Fill						
Discharge of dredge-and-fill	No discharge of dredged or fill material will be allowed unless appropriate and practicable steps are taken that minimize potential adverse impacts of the discharge on the aquatic ecosystem.	Discharges of dredged or fill material to surface waters, including wetlands.	40 CFR 230.10(d); 33 CFR 320.4(a), (b), (d), (p), (r)	2, 3, 4	Applicable	Onsite actions may include removal or replacement of sediments as well as dewatering removed sediment. These actions will be taken in accordance with the substantive provisions of Nationwide Permit 38. Steps will be taken to minimize the impacts to the ecosystem.
Storage of Petroleum and Non-petroleum Oils						
Storage of fuels and oils (petroleum and non-petroleum) onsite	If storage capacity limits are exceeded a Spill, Prevention, Control, and Countermeasures Plan must be prepared and implemented with procedures, methods, equipment, and other requirements to prevent the discharge of into or upon the navigable waters of the United States.	Total onsite storage capacity exceeding 1,320 gallons in containers that are 55 gallons or larger in size.	40 CFR 112.3(a)(1); 112.5; 112.6(a)(1), (a)(3)*; 112.7(a)(3)(i), (a)(3)(iv), (a)(3)(vi),(a)(4), (a)(5), (c), (e), (f),(g),(k); 112.8(b)(1), (b)(2), (c)(1), (c)(3), (c)(6), (c)(10), and (d)(4) *the provisions incorporated by reference here are not ARARs unless they are also listed in this table.	2, 3, 4	Applicable	It is anticipated that fuels or other treatment chemicals will be stored onsite. If the storage capacity in containers that are 55 gallons or greater is equal to or exceeds 1,320 gallons a Spill Prevention, Control, and Countermeasure (SPCC) Plan must be prepared and implemented. Containers include oil and fuel reservoirs in equipment. Onsite CERCLA actions are not subject to administrative requirements such as administrative reviews and endorsements.

TABLE B-6

Virginia Action-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Dredge and Fill						
Dredging, filling, and/or discharging pollutants into, or adjacent to, surface waters (including wetlands)	Regulations for activities undertaken in State surface waters	Activities such as dredging, filling, or discharging any pollutant into or adjacent to surface waters, or otherwise altering the physical, chemical, or biological properties of surface waters; excavating in wetlands; or conducting the following activities in a wetland: 1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions. 2. Filling or dumping. 3. Permanent flooding or impounding. 4. New activities that cause significant alteration or degradation of existing wetland acreage or functions.	9 VAC 25-210-90(F)(1), (2), (3); 115(C)(1); 116(A), (B), (C), (F);	2, 3, 4	Relevant and Appropriate	The removal area at SMWU 3 will be dredged to remove the impacted sediment and place a clean sand layer over the dredged areas. The clean sand layer will provide a layer of clean fill over the dredged area which will eliminate the need for post-dredging confirmation sampling. Relevant and appropriate because the action will not result in a net loss of wetland area.
Erosion and deposits of soil/sediment caused by land disturbing activities	Regulations for the effective control of soil erosion, sediment deposition and nonagricultural runoff which must be met in any control program to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources.	Construction activities that will disturb more than 10,000 square feet of land.	Erosion and Sediment Control Regulations, 4 VAC 50-30-40-2; 12; 14; 15; and 19(k)	2, 3, 4	Relevant and Appropriate	Since the response action occurs in a live watercourse and along its beds and banks, the only requirements in 4 VAC 50-30-40 that are relevant and appropriate to the response action itself are 12, 13, and 15. However, additional site work will be required to facilitate the response action including the construction of temporary access roads, material and equipment staging areas, and support facilities.
Waste Management						
Handling and storage of solid waste onsite in waste piles	Establishes standards and procedures pertaining to the management of solid wastes in stockpiles.	On-site management of wastes that meet the definition of solid waste in piles.	9 VAC 20-81-330(F)(1); 330(F)(2)(a)(1), (e),(f); 330(F)(4)	3	Applicable	Dredged sediment may be staged onsite in piles during the response action. In the event that staging piles are used they will be managed in accordance with these requirements.
Staging of solid waste onsite in containers	Establishes criteria for the proper management of solid wastes.	Management of solid wastes onsite in containers	9 VAC 20-81-95(D)(10)(b)	2, 3, 4	Applicable	It is anticipated that some wastes (such as decontamination fluids and sediment) may be generated and managed onsite in containers. Based on the analytical results from previous investigations, it is expected that these wastes will be non-hazardous solid waste. Wastes will be characterized prior to offsite disposal.

TABLE B-6

Virginia Action-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Accumulation of hazardous waste in containers onsite for less than 90 days	Hazardous waste may be accumulated on site in containers for up to 90 days so long as the containers are in good condition, compatible with the waste being stored, and labeled with the words "Hazardous Waste" and the date that accumulation began. The containers must also be kept closed unless adding or removing waste and inspected weekly.	Accumulation of hazardous waste in containers onsite.	9 VAC 20-60-262 only as it incorporates 40 CFR 262.34 (a) (1)(i), (2), (3), and 40 CFR 265.171 through 174	2, 3, 4	Applicable	It is possible that hazardous waste will be generated and staged onsite in containers for less than 90 days
Accumulation and/or treatment of hazardous waste in staging piles onsite	A staging pile must me designed constructed and maintained to prevent the migration of hazardous constituents other media. The design must consider location, hydrogeology, and any other factors that may reasonably influence the migration of hazardous constituents. Closure requirements are also included.	Accumulation or treatment of hazardous wastes in staging piles onsite	9 VAC 20-60-264 only as it incorporates 40 CFR 264.554(d)(1)(ii), (d)(2),	3, 4	Relevant and Appropriate	These requirements are applicable to operating a staging pile for treatment or staging of hazardous wastes in piles during this action. However, since it is not anticipated that hazardous wastes will be generated, these requirements are relevant and appropriate for this action. Staging piles will be designed and operated in accordance with these standards; however, since this is a CERCLA action no permit will be required. These requriements are applicable only if hazardous waste is generated and treated or staged in piles.
Treatment of hazardous waste in containers	Containers used for treatment must be in good condition and compatible with the waste being treated. The containers must also be kept closed unless adding or removing waste, handled to minimize the possibility of failure, and inspected weekly. The containers must also be protected from contact with precipitation.	Treatment of hazardous wastes in containers onsite	9 VAC 20-60-264 only as it incorporates 40 CFR 264.171 through 174, and 175(c)	3	Applicable	Applicable if hazardous waste will be treated ex situ in containers.
Wastewater Treatment						
Discharge to state waters	The Virginia Pollutant Discharge Elimination System (VPDES) regulates point source discharges to state waters.	Treatment of wastewater prior to discharge	9 VAC 25-31-190(D), (E), (J)(1), J(3), J(4); 200(A)(2)(a) and (A)(2)(b).	4	Applicable	The water treatment system will be designed and operated to meet the substantive requirements of the VDPES system. Onsite CERCLA actions are not subject to administrative requirements such as administrative reviews or permitting.

TABLE B-6

Virginia Action-Specific ARARs

SWMU 3

JEB Little Creek, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Dust Control						
Generation of fugitive dust	Regulations regarding reasonable precautions to prevent particulate matter from becoming airborne.	Conducting any activity which may cause particulate matter to become airborne.	9 VAC 5-50-90	3, 4	Applicable	Dust control measures will be implemented during activities at the site.

Acronyms and Abbreviations

ARAR	Applicable or relevant and appropriate requirement
BTAG	Biological Technical Assistance Group
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
DCR	Virginia Department of Conservation and Recreation
DNH	Division of Natural Heritage
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
NAAQS	National Ambient Air Quality Standards
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NSDWRs	National Secondary Drinking Water Regulations
NSPS	New Source Performance Standards
PCB	Polychlorinated biphenyls
PMCL	Primary Maximum Contaminant Level
POTW	Publicly Owned Treatment Works
ppm	Parts per Million
RBC	Risk-Based Concentrations
RCRA	Resource Conservation and Recovery Act
SDWA	Safe Drinking Water Act
SMCL	Secondary Maximum Contaminant Level
TBC	To Be considered
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substance Control Act
USACE	US Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
VA	Virginia
VAC	Virginia Administrative Code
VMRC	Virginia Marine Resource Commission
VPA	Virginia Pollutant Abatement
VPDES	Virginia Pollutant Discharge Elimination System

References

Commonwealth of Virginia, 2004. Preliminary Identification, Applicable or Relevant and Appropriate Requirements.

USEPA, 1998. *CERCLA Compliance with Other Laws Manual: Interim Final*. Office of Emergency and Remedial Response. EPA/540/G-89/006.

USEPA, 1998. *CERCLA Compliance with Other Laws Manual: Part II. Clean Air Act and Other Environmental Statutes.* Office of Emergency and Remedial Response. EPA/540/G-89/009.

USEPA, 1998. RCRA, Superfund & EPCRA Hotline Training Manual. Introduction to Applicable or Relevant and Appropriate Requirements. EPA540-R-98-020.

TABLE B-1

Federal Chemical-Specific ARARs

SWMU 7b EE/CA

JEB Little Creek

Virginia Beach, Virginia

Media	Requirement	Prerequisite	Citation	Alternative	ARAR/TBC Determination	Comment
Project Remediation Goals						
Sediment	Guidance document regarding how to conduct a technically defensible ecological risk assessment	Assessment of potential ecological risks.	Interim Final Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (EPA, June 1997). Copper (inorganic/metal) CAS #7440-50-8, Lead (inorganic/metal) CAS #7439-92-1, Mercury (inorganic/metal) CAS #7439-97-6, and Zinc (inorganic/metal) CAS #7440-66-6	2, 3, 4	TBC	The objective of the removal action at SWMU 7b is to reduce or eliminate risks to ecological receptors from copper, lead, mercury, and zinc in sediment. Project remediation goals (PRGs) for each contaminant of concern (COC) are below: Copper - 270 mg/kg Lead - 218 mg/kg Mercury - 0.71 mg/kg Zinc - 410 mg/kg

TABLE B-2

Virginia Chemical-Specific ARARs

SWMU 7b EE/CA

JEB Little Creek

Virginia Beach, Virginia

Media	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Wastewater Treatment						
Surface Water	Contains minimum standards for surface water quality. No discharge to surface water may cause these criteria to be violated.	Applicable to any discharge of industrial wastewater to state waters.	9 VAC 25-260-140A, 9 VAC 25-260-140B only as it pertains to Copper (CAS #7440-50-8), Lead (CAS #7439-92-1), and Zinc (CAS #7440-66-6)	2,3	Applicable	Alternatives 2 and 3 will include discharge of decant water to Desert Cove. Based on this process, the sediment COCs with specific limits have criteria listed that will be controled as part of the discharge. There are no standards specified for mercury. Treatment of the decant water to concentrations that are below background is not required. However, once removed, contaminated sediment must be prevented from discharging back to Desert Cove while dewatering occurs. Effluent sampling will not be required during discharge activities. Monitoring for visual changes in turbidity and sheen will be conducted.
			9 VAC 25-260-140A, 9 VAC 25-260-140B only as it pertains to Copper (CAS #7440-50-8), Lead (CAS #7439-92-1), and Zinc (CAS #7440-66-6), pH, and Temperature	4	Applicable	Alternative 4 includes treatment of the dredge slurry by filtration and the addition of a cationic polymer. Based on that process, the COCs with specific limits, pH, temperature, and toxicity have criteria listed that will be controled as part of the discharge. There are no standards specified for mercury. The final set of standards that will need to be monitored will be set after the design of the treatment system is completed.

TABLE B-3

Federal Location-Specific ARARs

SWMU 7b EE/CA

JEB Little Creek

Virginia Beach, Virginia

Location	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Migratory Flyway						
Migratory bird area	Protects almost all species of native birds in the United States from unregulated taking.	Presence of migratory birds.	*Migratory Bird Treaty Act;* 16 USC 703	2, 3, 4	Applicable	SWMU 7b is located in the Atlantic Migratory Flyway. If migratory birds, or their nests or eggs, are identified at SWMU 7b, operations will not destroy the birds, nests or eggs.
Coastal Zone						
Coastal zone or area that will affect the coastal zone	Federal activities must be consistent with, to the maximum extent practicable, State coastal zone management programs.Federal agencies must comply with the consistency requirements of 15 CFR § 930.	Actions that may affect identified coastal zone resources or uses	15 CFR 930.33(a)(1), (a)(2), (b); .35(a), (b); .36(a)	2, 3, 4	Applicable	Activities at SWMU 7b that will affect Virginia's coastal zone will be consistent to the maximum extent practicable with Virginia's enforceable policies. Activites performed on-site and in compliance with CERCLA are not subject to adminsitrative review; however the substantive requirements of making a consistency determination will be met.

TABLE B-4

Virginia Location-Specific ARARs

SWMU 7b EE/CA

JEB Little Creek

Virginia Beach, Virginia

Location	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Wetlands						
Wetlands	Mitigate or minimize the loss of wetlands and the adverse ecological effects of all permitted activities. To preserve the wetlands as much as possible in their natural state and to consider appropriate requirements for compensation only after it has been proven that the loss of the natural resource is unavoidable and that the project will have the highest public and private benefit. Commitments to preserve other existing wetlands shall not ordinarily be an acceptable form of compensation.	If a wetlands zoning ordinance has been adopted by local government, in accordance with the *General Provisions Relating to Marine Resources Commission* , and the response action is not exempt from its provisions, the project must comply with the requirements of the ordinance. In the case of absence of an ordinance, or of an exemption to it, VMRC can exercise jurisdiction over tidal wetlands.	4 VAC 20-390-40, 50	2, 3, 4	Relevant and Appropriate	It is not anticipated that onsite activities will disturb the existing wetland areas. The dredging operation will not result in a net loss of wetland area.
Presence of Threatened and Endangered Species or Habitat						
Area where endangered species are present	Identified federal and state threatened and endangered species are protected from unlawful taking. This requirement includes prohibition of activities that adversely affect critical habitat. The list of federal threatened and endangered species is incorporated into state law along with additions.	Activity in an area where listed threatened or endangered species are present or in an area that is designated as their critical habitat.	4VAC 15-20-130 (c), 2 VAC 5-320-10 (as it references §3.2-1003)	2, 3, 4	TBC	Per Navy policy, state-listed species are protected through the implementation of an Integrated Natural Resource Management Plan (INRMP). Compliance with the INRMP will constitute compliance with all substantive requirements in the regulations for this action.

TABLE B-5
Federal Action-Specific ARARs
SWMU 7b EE/CA
JEB Little Creek
Virginia Beach, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Dredge and Fill						
Discharge of dredge-and-fill	No discharge of dredged or fill material will be allowed unless appropriate and practicable steps are taken that minimize potential adverse impacts of the discharge on the aquatic ecosystem.	Discharges of dredged or fill material to surface waters, including wetlands.	40 CFR 230.10(d); 33 CFR 320.4(a), (b), (d), (p), (r)	2, 3, 4	Applicable	Onsite actions may include removal of sediments as well as dewatering removed sediment. These actions will be taken in accordance with the substantive provisions of Nationwide Permit 38. Steps will be taken to minimize the impacts to the ecosystem.
Storage of Petroleum and Non-petroleum Oils						
Storage of fuels and oils (petroleum and non-petroleum) onsite	If storage capacity limits are exceeded a Spill, Prevention, Control, and Countermeasures Plan must be prepared and implemented with procedures, methods, equipment, and other requirements to prevent the discharge of into or upon the navigable waters of the United States.	Total onsite storage capacity exceeding 1,320 gallons in containers that are 55 gallons or larger in size.	40 CFR 112.3(a)(1); 112.5; 112.6(a)(1), (a)(3)*; 112.7(a)(3)(i), (a)(3)(iv), (a)(3)(vi),(a)(4), (a)(5), (c), (e), (f),(g),(k); 112.8(b)(1), (b)(2), (c)(1), (c)(3), (c)(6), (c)(10), and (d)(4) *the provisions incorporated by reference here are not ARARs unless they are also listed in this table.	2, 3, 4	Applicable	It is anticipated that fuels or other treatment chemicals will be stored onsite. If the storage capacity in containers that are 55 gallons or greater is equal to or exceeds 1,320 gallons a Spill Prevention, Control, and Countermeasure (SPCC) Plan must be prepared and implemented. Containers include oil and fuel reservoirs in equipment. Onsite CERCLA actions are not subject to administrative requirements such as administrative reviews and endorsements.

TABLE B-6
Virginia Action-Specific ARARs
SWMU 7b EE/CA
JEB Little Creek
Virginia Beach, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Dredge and Fill						
Dredging, filling, and/or discharging pollutants into, or adjacent to, surface waters (including wetlands)	Regulations for activities undertaken in State surface waters	Activities such as dredging, filling, or discharging any pollutant into or adjacent to surface waters, or otherwise altering the physical, chemical, or biological properties of surface waters; excavating in wetlands; or conducting the following activities in a wetland: 1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions	9 VAC 25-210-90(F)(1), (2), (3); 115(C)(1)	2, 3, 4	Applicable	The removal area at SWMU 7b will be dredged to remove the impacted sediment and place a clean sand layer over the dredged areas. The clean sand layer will provide a layer of clean fill over the dredged area which will eliminate the need for post-dredging confirmation sampling.The substantive provisions of these regulations will be met, however onsite CERCLA actions are not subject to permitting. Measures that will be taken to protect water quality will be detailed in the remedial design or remedial action work plan.
Erosion and deposits of soil/sediment caused by land disturbing activities	Regulations for the effective control of soil erosion, sediment deposition and nonagricultural runoff which must be met in any control program to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources.	Construction activities that will disturb more than 10,000 square feet of land.	Erosion and Sediment Control Regulations, 4 VAC 50-30-40-2; 12; 14; 15; 16(c); and 19(k)	2, 3, 4	Relevant and Appropriate	Since the response action occurs in a live watercourse and along its beds and banks, the only requirements in 4 VAC 50-30-40 that are relevant and appropriate to the response action itself are 12, 14, and 15. However, additional site work will be required to facilitate the response action including the construction of temporary access roads, material and equipment staging areas, and support facilities.
Waste Management						
Handling and storage of solid waste onsite in waste piles	Establishes standards and procedures pertaining to the management of solid wastes in stockpiles.	On-site management of wastes that meet the definition of solid waste in piles.	9 VAC 20-81-330(F)(1); 330(F)(2)(a)(1), (e),(f); 330(F)(4)	3	Applicable	Dredged sediment may be staged onsite in piles during the response action. In the event that staging piles are used they will be managed in accordance with these requirements.

TABLE B-6
Virginia Action-Specific ARARs
SWMU 7b EE/CA
JEB Little Creek
Virginia Beach, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Staging of solid waste onsite in containers	Establishes criteria for the proper management of solid wastes.	Management of solid wastes onsite in containers	9 VAC 20-81-95(D)(10)(b)	2, 3, 4	Applicable	It is anticipated that some wastes (such as decontamination fluids and sediment) may be generated and managed onsite in containers. Based on the analytical results from previous investigations, it is expected that these wastes will be non-hazardous solid waste. Wastes will be characterized prior to offsite disposal.
Accumulation of hazardous waste in containers onsite for less than 90 days	Hazardous waste may be accumulated on site in containers for up to 90 days so long as the containers are in good condition, compatible with the waste being stored, and labeled with the words “Hazardous Waste” and the date that accumulation began. The containers must also be kept closed unless adding or removing waste and inspected weekly.	Accumulation of hazardous waste in containers onsite.	9 VAC 20-60-262 only as it incorporates 40 CFR 262.34 (a) (1)(i), (2), (3), and 40 CFR 265.171 through 174	2, 3, 4	Applicable	It is possible that hazardous waste will be generated and staged onsite in containers for less than 90 days.
Accumulation and/or treatment of hazardous waste in staging piles onsite	A staging pile must me designed constructed and maintained to prevent the migration of hazardous constituents other media. The design must consider location, hydrogeology, and any other factors that may reasonably influence the migration of hazardous constituents. Closure requirements are also included.	Accumulation or treatment of hazardous wastes in staging piles onsite	9 VAC 20-60-264 only as it incorporates 40 CFR 264.554(d)(1)(ii), (d)(2)	4	Applicable	It is possible that hazardous waste will be generated and staged onsite in piles. Staging piles will be designed and operated in accordance with these standards. Wastes will be characterized prior to offsite disposal.

TABLE B-6
Virginia Action-Specific ARARs
SWMU 7b EE/CA
JEB Little Creek
Virginia Beach, Virginia

Action	Requirement	Prerequisite	Citation	Alternative	ARAR Determination	Comment
Treatment of hazardous waste in containers	Containers used for treatment must be in good condition and compatible with the waste being treated. The containers must also be kept closed unless adding or removing waste, handled to minimize the possibility of failure, and inspected weekly. The containers must also be protected from contact with precipitation.	Treatment of hazardous wastes in containers onsite	9 VAC 20-60-264 only as it incorporates 40 CFR 264.171 through 174, and 175(c)	3	Applicable	Applicable if hazardous waste will be treated ex situ in containers.
Wastewater Treatment						
Discharge to state waters	The Virginia Pollutant Discharge Elimination System (VPDES) regulates point source discharges to state waters.	Treatment of wastewater prior to discharge	9 VAC 25-31-190(D), (E), (J)(1), J(3), J(4); 200(A)(2)(a) and (A)(2)(b).	4	Applicable	The water treatment system will be designed and operated to meet the substantive requirements of the VDPES system. Onsite CERCLA actions are not subject to administrative requirements such as administrative reviews or permitting.
Dust Control						
Generation of fugitive dust	Regulations regarding reasonable precautions to prevent particulate matter from becoming airborne.	Conducting any activity which may cause particulate matter to become airborne.	9 VAC 5-50-90	3, 4	Applicable	Dust control measures will be implemented during activities at the site.

Acronyms and Abbreviations

ARAR	Applicable or relevant and appropriate requirement
BTAG	Biological Technical Assistance Group
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
DCR	Virginia Department of Conservation and Recreation
DNH	Division of Natural Heritage
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
NAAQS	National Ambient Air Quality Standards
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NSDWRs	National Secondary Drinking Water Regulations
NSPS	New Source Performance Standards
PCB	Polychlorinated biphenyls
PMCL	Primary Maximum Contaminant Level
POTW	Publicly Owned Treatment Works
ppm	Parts per Million
RBC	Risk-Based Concentrations
RCRA	Resource Conservation and Recovery Act
SDWA	Safe Drinking Water Act
SMCL	Secondary Maximum Contaminant Level
TBC	To Be considered
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substance Control Act
USACE	US Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
VA	Virginia
VAC	Virginia Administrative Code
VMRC	Virginia Marine Resource Commission
VPA	Virginia Pollutant Abatement
VPDES	Virginia Pollutant Discharge Elimination System

References

Commonwealth of Virginia, 2004. Preliminary Identification, Applicable or Relevant and Appropriate Requirements.

USEPA, 1998. *CERCLA Compliance with Other Laws Manual: Interim Final*. Office of Emergency and Remedial Response. EPA/540/G-89/006.

USEPA, 1998. *CERCLA Compliance with Other Laws Manual: Part II. Clean Air Act and Other Environmental Statutes.* Office of Emergency and Remedial Response. EPA/540/G-89/009.

USEPA, 1998. RCRA, Superfund & EPCRA Hotline Training Manual. Introduction to Applicable or Relevant and Appropriate Requirements. EPA540-R-98-020.

Attachment C
Daily Observation Report

CH2MHILL	**DAILY REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	REPORT DATE : REVISION NO: REVISION DATE: REPORT NO:

PROJECT NAME / LOCATION:			
PROJECT NUMBER:	PROJECT DESCRIPTION:		
PROJECT MANAGER:			
ONSITE SUPPORT:		START TIME/ END TIME:	
AM WEATHER:	PM WEATHER:	WIND DIRECTION:	

WORK FORCE (includes subcontractors and visitors)

Name/Company	Total Hours Today

SUMMARY OF WORK PERFORMED TODAY

EQUIPMENT ON HAND

Description of Equipment	Make/Model/Manufacturer	Equipment ID Number	Calibration Performed By

FIELD OBSERVATIONS:

DATA REVIEW:

CHANGED CONDITIONS/DELAY/CONFLICTS ENCOUNTERED:

DISCUSSION NOTES:

ACTION ITEMS/FOLLOW UP:

HEALTH AND SAFETY REPORT		
Was A Job Safety Meeting Held This Date?	☐ Yes	☐ No
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes	☐ No
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes	☐ No
Was Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done? (If Yes, attach statement or checklist showing inspection performed)	☐ Yes	☐ No
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes	☐ No

SAFETY ACTIONS TAKEN TODAY (Include Observations of any Safety Violations, Corrective Instructions Given, and Corrective Actions Taken):

FUTURE WORK

Planned Work for this week:

Planned Work for Next Week:

WASTE ACCUMULATION/STOCKPILE AREA

Accumulation / Stockpile Area							
No of Containers::		No of Tank		No of Roll-Off Boxes::		No. of Drums	

Notes:

TRANSPORTATION AND DISPOSAL

Transportation and Disposal Activites/Summary Quantitites:

ATTACHMENTS

List of Attachments: (examples, as applicable: submittals, meeting minutes, safety meeting minutes,, COCs, weight tickets, manifests, profiles, rework item list, etc.):

On behalf of CH2M HILL, I attest that to the best of my knowledge the report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications except as noted in this report

PREPARER'S SIGNATURE

DATE

CH2MHILL	**PHOTO LOG** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	LOG DATE : REPORT NO:

PROJECT NAME / LOCATION:			
PROJECT NUMBER:	PROJECT DESCRIPTION:		
PROJECT MANAGER:		ONSITE SUPPORT:	

Picture #	Photo Description/Location	Date	Daily Log #